

Mr. Dean Logan  
Rieth-Riley Construction Company, Inc.  
P.O. Box 477  
Goshen, IN 46527-0477

Re: **157-13666**  
Second Significant Revision to  
**FESOP 157-5448-03286**

Dear Mr. Logan:

Rieth-Riley Construction Company, Inc. was issued a Federally Enforceable State Operating Permit (FESOP) on December 11, 1996 for the two (2) portable batch hot-mix asphalt plants. A letter requesting changes to this permit was received on December 27, 2000. Pursuant to the provisions of 326 IAC 2-8-11.1 a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of changing the fuel used at the one (1) aggregate dryer at plant 157-03310, with a capacity of 75 million British thermal units per hour, from natural gas as the primary fuel to re-refined oil as the primary fuel, with backup fuels of no. 2 and no. 4 distillate oils, propane, butane and natural gas.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions  
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Rieth-Riley Construction Company, Inc.  
Lafayette, Indiana  
Permit Reviewer SDF

Page 2 of 2  
FESOP 157-5448-03286

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Scott Fulton, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 317-233-5691 or in Indiana at 1-800-451-6027 (ext 3-5691).

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments  
SDF

cc: File - Tippecanoe County  
Air Compliance Section Inspector - Eric Courtright  
Compliance Data Section - Karen Nowak  
Administrative and Development - Janet Mobley  
Technical Support and Modeling - Michele Boner

# **FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) OFFICE OF AIR QUALITY**

Rieth-Riley Construction Co., Inc.  
3425 O'Farrel Road  
Lafayette, Indiana 47904

(Herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the facilities listed in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 and contains the conditions and provisions specified in 326 IAC 2-8 and 40 CFR Part 70.6 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments) and IC 13-15 and IC 13-17 (prior to July 1, 1996, IC 13-1-1-4 and IC 13-7-10).

Operation Permit No.: F157-5448-03286	Date Issued: December 11, 1996
First Administrative Amendment: 157-10038	Issuance Date: August 31, 1998
First Significant Permit Revision: 157-12074	Issuance Date: July 17, 2000
Second Administrative Amendment: 157-12490	Issuance Date: September 27, 2000
Second Significant Permit Revision: 157-13666	Pages affected: 4, 5, 23, 24, 25a, 25b, 26, 27a, 27b, and 32, with 24a, 24b, 24c, 24d, and 32a added
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: June 26, 2001

## SECTION A SOURCE SUMMARY

### A.1 General Information [326 IAC 2-8-3(c)]

The Permittee owns and operates two (2) stationary batch hot-mix asphalt plants: Plant ID No. 157-03310 with a maximum operating capacity of 225 tons per hour and Plant ID No. 157-03286 with a maximum operating capacity of 200 tons per hour. Plant ID No. 157-03310 also produces cold mix asphalt.

Responsible Official:	Dean K. Logan
Source Address:	3425 O'Farrel Road, Lafayette, Indiana 47904
Mailing Address:	P.O. Box 477, Goshen, Indiana 46527-0477
SIC Code:	2951
County Location:	Tippecanoe
County Status:	Attainment for all criteria pollutants
Source Status:	Minor Source, PSD Rules; Synthetic Minor Source, Part 70 Permit Program

### A.2 Emission Units and Pollution Control Summary [326 IAC 2-8-3(c)]

The stationary source consists of the following emission units and pollution control devices:

Plant ID No. 157-03310

- (a) One (1) aggregate dryer with a maximum capacity of 225 tons per hour, having a burner with a maximum heat input rate of 75 million British thermal units per hour, exhausting through a baghouse at stack SV1a. The burner is fired by re-refined oil, with backup fuels of No. 2 and No. 4 distillate oils, propane, butane, and natural gas.
- (b) One (1) baghouse with a total filter area of 11,677 square feet.

Plant ID No. 157-03286

- (a) One (1) aggregate dryer with a maximum capacity of 200 tons per hour, having a burner with a maximum heat input rate of 82.4 million British thermal units per hour, exhausting through a baghouse at stack SV1. The burner is fired by re-refined oil, with backup fuels of No. 2 and No. 4 distillate oils, propane, butane, and natural gas.
- (b) One (1) baghouse with a total filter area of 6,720 square feet.

### A.3 Insignificant Activities

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20):

Plant ID No. 157-03310

- (1) One (1) natural gas-fired combustion unit with a heat input equal to or less than 10 million British thermal units per hour per hour (0.5 million British thermal units per hour).

- (2) One (1) natural gas-fired combustion unit with a heat input equal to or less than 10 million British thermal units per hour (1.2 million British thermal units per hour).
- (3) One (1) material conveying and handling operation.
- (4) Paved and unpaved roads and parking lots with public access.
- (5) Plant maintenance activities including grinding, sanding, and welding.
- (6) One (1) 30,000 gallon storage tank ID No. 20 for liquid asphalt AC-20.
- (7) One (1) 20,000 gallon storage tank ID No. 21 for liquid asphalt.
- (8) One (1) material storage and handling operation.
- (9) two (2) re-refined oil above ground storage tanks, identified as Tanks 16A and 16B, with design capacities of 12,500 and 8,000 gallons respectively.

Plant ID No. 157-03286

- (1) One (1) liquid propane-fired combustion unit with heat input less than 6 million British thermal units per hour (0.8 million British thermal units per hour).
- (2) One (1) 35,000 gallon storage tank ID No. 15 for liquid asphalt AC-20.
- (3) One (1) 18,000 gallon storage tank ID No. 16 for liquid propane.
- (4) One (1) testing laboratory as defined in 326 IAC 2-7-1(20).
- (5) One (1) material storage and handling operation.
- (6) Paved and unpaved roads and parking lots with public access.
- (7) One (1) material conveying and handling operation.
- (8) Plant maintenance activities including grinding sanding, and welding.
- (9) One (1) above ground storage tank, identified as Tank K, constructed in 1970, storing re-refined oil, capacity: 20,000 gallons.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

## SECTION D.1

## FACILITY OPERATION CONDITIONS

### Plant ID No. 157-03310

(1) One (1) aggregate dryer with a maximum capacity of 225 tons per hour, having a burner with a maximum heat input rate of 75 million British thermal units per hour, exhausting through a baghouse at stack SV1a. The burner is fired by re-refined oil, with backup fuels of No. 2 and No. 4 distillate oils, propane, butane and natural gas.

(2) One (1) baghouse with a total filter area of 11,677 ft<sup>2</sup>.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Particulate Matter (PM) [40 CFR 60.90, 60.91, 60.92 & 60.93] [326 IAC 6-3-2] [326 IAC 2-2]  
Pursuant to the New Source Performance Standards, 326 IAC 12 (40 CFR 60.90 to 60.93, Subpart I), the particulate matter emissions from the aggregate dryer/mixer shall not exceed 0.04 grain per dry standard cubic foot, equivalent to 11.2 pounds per hour and 49.2 tons per year, and visible emissions from the plant shall not exceed twenty percent (20%) opacity. Compliance with these limits will also satisfy 326 IAC 6-3-2 and make 326 IAC 2-2 not applicable.

D.1.2 Particulate Matter Ten Microns (PM-10)  
That pursuant to 326 IAC 2-8-4, emissions of particulate matter ten microns from the aggregate dryer/mixer shall not exceed 9.17 pounds per hour (lb/hr), including both filterable and condensable fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.1.3 Volatile Organic Compounds (VOC)

That pursuant to 326 IAC 2-8-4, the VOC usage in the production of cold mix cutback asphalt shall be limited to 95.16 tons per year (ton/yr). This is equivalent to 11,514 tons of liquid binder used per year in the production of cold mix cutback asphalt based on 5.1 percent diluent present in the asphalt. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.1.4 Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 2-8-4]  
Pursuant to 326 IAC 2-8-4(1), the total re-refined oil usage will be limited to no more than 792,000 gallons per consecutive twelve (12) month period. For the purposes of this limit, the following conversions shall be used to determine the equivalent fuel use for the following alternative fuels:

(a)	Natural Gas:	0.00704225	* cubic feet Natural Gas	= gallons of Re-refined Oil
(b)	No. 2 Fuel Oil:	0.9718309	* gallons of No. 2 Fuel Oil	= gallons of Re-refined Oil
(c)	No. 4 Fuel Oil:	1.028169	* gallons of No. 4 Fuel Oil	= gallons of Re-refined Oil
(d)	Propane:	0.661971	* gallons of Propane	= gallons of Re-refined Oil
(e)	Butane:	0.7183098	* gallons of Butane	= gallons of Re-refined Oil

Therefore, the Part 70 Permit Program rules, 326 IAC 2-7, do not apply.

**D.1.5 Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-1.1-2]**

- (a) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the aggregate dryer shall not exceed five tenths (0.5) pound per million British thermal units heat input, when operating on No. 2 or No. 4 distillate oil. In order to comply with this limit the sulfur content of the No. 2 distillate oil or No. 4 distillate oil shall not exceed 0.5 percent (0.5%).
- (b) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the aggregate dryer shall not exceed one and six-tenths (1.6) pounds per million British thermal units, when operating on re-refined oil. In order to comply with this limit and the fuel use limit of Condition D.1.4, the sulfur content of the re-refined oil shall not exceed 1.0 percent (1.0%).

**Testing requirements [326 IAC 2-8-4(3)]**

**D.1.6 Performance Testing [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]**

Within 60 days after achieving the maximum production rate at which the aggregate dryer will be operated using re-refined oil, but not later than 180 days after initial startup using re-refined oil, the Permittee shall perform PM and PM<sub>10</sub> testing utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM<sub>10</sub>, or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing.

**Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]**

**D.1.7 Monitoring of Baghouse Operational Parameters**

That the baghouse shall be operated at all times when the aggregate dryer is in operation. The Permittee shall monitor the following parameters:

- (a) The total static pressure drop across the baghouse shall be measured and recorded once per shift while under normal operation. The pressure drop for the unit shall be maintained within the range of 2.0 inches to 5.0 inches of water. If the pressure drop falls outside of this range, corrective action must be taken immediately in accordance with the Preventive Maintenance Plan as submitted to IDEM on March 14, 1996.
- (b) The inlet temperature to the baghouse shall be maintained within a range of 200 to 350 degrees F to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. In the event that the temperature is outside of this range, corrective action shall be taken within 8 hours.

In the event that bag failure has occurred due to rupture, melting., etc., corrective action shall be taken. Dependent upon the severity of the excursion, corrective action shall not exceed 8 hours from the time of discovery. The baghouse shall shutdown for visual inspection within 24 hours and bags shall be replaced as needed.

- (c) The inlet temperature to the baghouse shall be maintained within a range of 200 to 350 degrees F to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. In the event that the temperature is outside of this range, corrective action shall be taken within 8 hours.

In the event that bag failure has occurred due to rupture, melting., etc., corrective action shall be taken. Dependent upon the severity of the excursion, corrective action shall not exceed 8 hours from the time of discovery. The baghouse shall shutdown for visual inspection within 24 hours and bags shall be replaced as needed.

**D.1.8 Daily Visible Emission Notations**

Daily visible emission notations of the conveyors, material transfers, aggregate storage piles, unpaved roads, and the mixing and drying operation stack exhaust shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for each unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

**D.1.9 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

**Record Keeping Requirements [326 IAC 2-8-4(9)]**

**D.1.10 Production Rate**

The Permittee shall maintain monthly records at the source of the following values:

- (a) Tons of liquid binder used; and
- (b) Average diluent content.

**D.1.11 Sulfur Dioxide Emissions and Sulfur Content**

Compliance shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal units heat input, when operating on No. 2 or No. 4 distillate oil, and one and six-tenths (1.6) pounds per million British thermal units when operating on re-refined oil by:
  - (1) Providing vendor analysis of fuel delivered, if accompanied by a certification;
  - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.



- (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
  - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the aggregate dryer, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

#### D.1.12 Operational Parameters and Quarterly Reporting

The Permittee shall maintain monthly records at the stationary source of fuel usage. Quarterly summaries to document compliance with operation condition D.1.4 shall be submitted, using the enclosed form or its equivalent, within thirty (30) days after the end of the quarter being reported. This report shall include the number of gallons of each fuel used.

#### D.1.13 Record Keeping Requirements

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- (a) To document compliance with the percent sulfur content limitations in Condition D.1.4 and to document compliance with Condition D.1.5, the Permittee shall maintain records in accordance with (1) through (6) below.
- (1) Calendar dates covered in the compliance determination period;
  - (2) Actual fuel usage of each fuel used since last compliance determination period and equivalent sulfur dioxide emissions;
  - (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, the natural gas fired boiler certification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

- (4) Fuel supplier certifications;
- (5) The name of the fuel supplier; and
- (6) A statement from the each fuel supplier that certifies the sulfur content of the fuels used.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

- (b) To document compliance with Condition D.1.8, the Permittee shall maintain records of visible emission notations of the baghouse stack exhaust once per shift.
- (c) To document compliance with Condition D.1.7, the Permittee shall maintain the following:

- (1) Weekly records of the following operational parameters during normal operation when venting to the atmosphere:
    - (A) Inlet and outlet differential static pressure;
    - (B) Cleaning cycle: frequency and differential pressure; and
    - (C) inlet temperature.
  - (2) Documentation of all response steps implemented, per event .
  - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
  - (4) Quality Assurance/Quality Control (QA/QC) procedures.
  - (5) Operator standard operating procedures (SOP).
  - (6) Manufacturer's specifications or its equivalent.
  - (7) Equipment "troubleshooting" contingency plan.
  - (8) Documentation of the dates vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.14 Used Oil Requirements

The re-refined oil burned in the aggregate dryer shall comply with the used oil requirements specified in 329 IAC 13 (Used Oil Management). Pursuant to 329 IAC 13-3-2 (Used Oil Specifications), used oil burned for energy recovery that is classified as off-specification used oil fuel shall comply with the provisions of 329 IAC 13-8 (Used Oil Burners Who Burn Off-specification Used Oil For Energy Recovery), including:

- (a) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),
- (b) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and
- (c) Maintaining records pursuant to 329 IAC 13-8-6 (Tracking).

The burning of mixtures of used oil and hazardous waste that is regulated under 329 IAC 3.1 is prohibited at this source.

#### D.1.15 NSPS Reporting Requirement

Pursuant to the New Source Performance Standards (NSPS), Part 60.90, Subpart I, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- (a) Commencement of construction date (no later than 30 days after such date);
- (b) Actual start-up date (within 15 days after such date); and
- (c) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015

The application and enforcement of these standards have been delegated to the IDEM OAQ.  
The requirements of 40 CFR Part 60 are also federally enforceable.

## SECTION D.2 FACILITY OPERATION CONDITIONS

### Plant ID No. 157-03286

(1) One (1) aggregate dryer with a maximum capacity of 200 tons per hour, having a burner with a maximum heat input rate of 82.4 million British thermal units per hour, exhausting through a baghouse at stack SV1. The burner is fired by re-refined oil, with backup fuels of No. 2 and No. 4 distillate oils, propane, butane and natural gas.

(2) One (1) baghouse with a total filter area of 6,720 square feet.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Particulate Matter (PM) [40 CFR 60.90, 60.91, 60.92 & 60.93] [326 IAC 6-3-2] [326 IAC 2-2]  
Pursuant to the New Source Performance Standards, 326 IAC 12 (40 CFR 60.90 to 60.93, Subpart I), the particulate matter emissions from the aggregate dryer/mixer shall not exceed 0.04 grain per dry standard cubic foot, equivalent to 11.2 pounds per hour and 49.2 tons per year, and visible emissions from the plant shall not exceed twenty percent (20%) opacity. Compliance with these limits will also satisfy 326 IAC 6-3-2 and make 326 IAC 2-2 not applicable.

D.2.2 Particulate Matter Less Than 10 Microns (PM-10)  
That pursuant to the 326 IAC 2-8-4, emissions of particulate matter less than 10 microns from the aggregate dryer shall not exceed 9.17 pounds per hour (lb/hr) of filterable PM-10. Compliance with this limit will satisfy 326 IAC 2-8-4. Due to this limit, Part 70 Program rules do not apply.

D.2.3 Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 2-8-4]  
Pursuant to 326 IAC 2-8-4(1), the total re-refined oil usage will be limited to no more than 528,000 gallons per consecutive twelve (12) month period and the sulfur content of the re-refined oil shall be limited to no more than 1.0%. For the purposes of this limit, the following conversions shall be used to determine the equivalent fuel use for the following alternative fuels:

(a)	Natural Gas:	0.00704225	* cubic feet Natural Gas	= gallons of Re-refined Oil
(b)	No. 2 Fuel Oil:	0.9718309	* gallons of No. 2 Fuel Oil	= gallons of Re-refined Oil
(c)	No. 4 Fuel Oil:	1.028169	* gallons of No. 4 Fuel Oil	= gallons of Re-refined Oil
(d)	Propane:	0.661971	* gallons of Propane	= gallons of Re-refined Oil
(e)	Butane:	0.7183098	* gallons of Butane	= gallons of Re-refined Oil

Therefore, the Part 70 Permit Program rules, 326 IAC 2-7, do not apply.

D.2.4 Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-1.1-2]  
(a) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the aggregate dryer shall not exceed five tenths (0.5) pound per million British thermal units heat input, when operating on No. 2 or No. 4 distillate oil. In order to comply with this limit the sulfur content of the No. 2 distillate oil or No. 4 distillate oil shall not exceed 0.5 percent (0.5%).

- (b) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the aggregate dryer shall not exceed one and six-tenths (1.6) pounds per million British thermal units, when operating on re-refined oil. In order to comply with this limit the sulfur content of the re-refined oil shall not exceed 1.0 percent (1.0%).

#### **Testing Requirements [326 IAC 2-8-4(3)]**

##### **D.2.5 Performance Testing [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]**

- (a) Between 540 days to 720 days of the issuance of this permit, the Permittee shall perform PM and PM<sub>10</sub> testing utilizing methods per 40 CFR 60 Appendix A, Method 5, 17, 40 CFR Part 51 Appendix M, Method 201, 201a, 202, as approved by the Commissioner to demonstrate compliance with Condition D.2.1 and D.2.2. PM<sub>10</sub> includes filterable and condensible PM<sub>10</sub>.
- (b) During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM and PM<sub>10</sub> testing utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM<sub>10</sub>, or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensible PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing.

#### **Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]**

##### **D.2.6 Monitoring of Baghouse Operational Parameters**

The baghouse shall be operated at all times when the aggregate dryer is in operation. The Permittee shall monitor the following parameters:

- (a) The total static pressure drop across the baghouse shall be measured and recorded once per shift while under normal operation. The pressure drop for this unit shall be maintained within the range of 7.0 inches to 10.0 inches of water. If the pressure drop falls outside of this range, corrective action must be taken immediately in accordance with the preventive maintenance Plan as submitted to IDEM on March 14, 1996.
- (b) The inlet temperature to the baghouse shall be maintained within a range of 200 to 350 degrees F to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. In the event that the temperature is outside the range, corrective action shall be taken within 8 hours.

In the event that bag failure has occurred due to rupture, melting, etc., corrective action shall be taken. Dependent upon the severity of the excursion, corrective action shall not exceed 8 hours from the time of discovery. The baghouse shall shut down for visual inspection within 24 hours and bags shall be replaced as needed.

**D.2.7 Daily Visible Emission Notations**

Daily visible emission notations of the conveyors, material transfers, aggregate storage piles, unpaved roads, and the mixing and drying operation stack exhaust shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during the part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristic of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when abnormal emission is observed.

**D.2.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

**D.2.9 Sulfur Dioxide Emissions and Sulfur Content**

Compliance shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal units heat input, when operating on no. 2 or no. 4 distillate oil, and one and six-tenths (1.6) pounds per million British thermal units when operating on re-refined oil by:
  - (1) Providing vendor analysis of fuel delivered, if accompanied by a certification;
  - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
    - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
    - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the aggregate dryer, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

**D.2.10 Operational Parameters and Quarterly Reporting**

The Permittee shall maintain monthly records at the stationary source of fuel usage. Quarterly summaries to document compliance with operation condition D.2.3 shall be submitted, using the enclosed forms or their equivalents, within thirty (30) days after the end of the quarter being reported. These reports shall include the number of gallons of each fuel used.

#### D.2.11 Record Keeping Requirements

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- (a) To document compliance with the percent sulfur content limitations in Condition D.2.3 and to document compliance with Condition D.2.4, the Permittee shall maintain records in accordance with (1) through (6) below.
- (1) Calendar dates covered in the compliance determination period;
  - (2) Actual fuel usage of each fuel used since last compliance determination period and equivalent sulfur dioxide emissions;
  - (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, the natural gas fired boiler certification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

- (4) Fuel supplier certifications;
- (5) The name of the fuel supplier; and
- (6) A statement from the each fuel supplier that certifies the sulfur content of the fuels used.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

- (b) To document compliance with Condition D.2.7, the Permittee shall maintain records of visible emission notations of the baghouse stack exhaust once per shift.
- (c) To document compliance with Condition D.2.6, the Permittee shall maintain the following:
- (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
    - (A) Inlet and outlet differential static pressure;
    - (B) Cleaning cycle: frequency and differential pressure; and
    - (C) inlet temperature.
  - (2) Documentation of all response steps implemented, per event .
  - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
  - (4) Quality Assurance/Quality Control (QA/QC) procedures.

- (5) Operator standard operating procedures (SOP).
  - (6) Manufacturer's specifications or its equivalent.
  - (7) Equipment "troubleshooting" contingency plan.
  - (8) Documentation of the dates vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.2.12 Used Oil Requirements

The re-refined oil burned in the aggregate dryer shall comply with the used oil requirements specified in 329 IAC 13 (Used Oil Management). Pursuant to 329 IAC 13-3-2 (Used Oil Specifications), used oil burned for energy recovery that is classified as off-specification used oil fuel shall comply with the provisions of 329 IAC 13-8 (Used Oil Burners Who Burn Off-specification Used Oil For Energy Recovery), including:

- (a) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),
- (b) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and
- (c) Maintaining records pursuant to 329 IAC 13-8-6 (Tracking).

The burning of mixtures of used oil and hazardous waste that is regulated under 329 IAC 3.1 is prohibited at this source.

#### D.2.13 NSPS Reporting Requirement

Pursuant to the New Source Performance Standards (NSPS), Part 60.90, Subpart I, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- (a) Commencement of construction date (no later than 30 days after such date);
- (b) Actual start-up date (within 15 days after such date); and
- (c) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015

The application and enforcement of these standards have been delegated to the IDEM OAM. The requirements of 40 CFR Part 60 are also federally enforceable.



**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
COMPLIANCE DATA SECTION  
FESOP Quarterly Report**

Source Name: Keiser & Keiser Contractors, Inc.  
Source Address: 3425 O'Farrel Road, Lafayette, IN 47904  
Mailing Address: 3425 O'Farrel Road, Lafayette, IN 47904  
FESOP No.: F 157-5448-03286  
Facility: One (1) aggregate dryer at Plant 03286 - Section D.2  
Parameter: Re-refined oil usage (SO<sub>2</sub> emissions)

Limit: 528,000 gallons per consecutive twelve (12) month period. For the purposes of this limit, use the following conversions:

(a) Natural Gas: 0.00704225 \* cubic feet of Natural Gas = gallons of Re-refined Oil  
(b) No. 2 Fuel Oil: 0.9718309 \* gallons of No. 2 Fuel Oil = gallons of Re-refined Oil  
(c) No. 4 Fuel Oil: 1.028169 \* gallons of No. 4 Fuel Oil = gallons of Re-refined Oil  
(d) Propane: 0.661971 \* gallons of Propane = gallons of Re-refined Oil  
(e) Butane: 0.7183098 \* gallons of Butane = gallons of Re-refined Oil

The SO<sub>2</sub> emissions from plant 03286 shall be less than 39.60 tons per year.

YEAR:

Month	This Month			Previous 11 Months	12-Month Total
	Re-refined Oil usage (gallons)	Re-refined Oil equivalent of other fuels (ex. 1.31 x butane usage) (gallons)	Total Equivalent Re-refined Oil usage (gallons)	Re-refined Oil used + Re-refined oil equivalent of other fuels used (gallons)	Re-refined Oil used + Re-refined oil equivalent of other fuels used (gallons)

- 9 No deviation occurred in this quarter.  
9 Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION  
 FESOP Quarterly Report**

Source Name: Rieth-Riley Construction Company, Inc.  
 Source Address: 3425 O'Farrel Road, Lafayette, IN 47904  
 Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477  
 FESOP No.: F 157-5448-03286  
 Facility: One (1) aggregate dryer at Plant 03310 - Section D.1  
 Parameter: Re-refined oil usage (SO<sub>2</sub> emissions)

Limit: 792,000 gallons per consecutive twelve (12) month period. For the purposes of this limit, use the following conversions:

(a)	Natural Gas:	0.00704225 *	cubic feet Natural Gas	=	gallons of Re-refined Oil
(b)	No. 2 Fuel Oil:	0.9718309 *	gallons of No. 2 Fuel Oil	=	gallons of Re-refined Oil
(c)	No. 4 Fuel Oil:	1.028169 *	gallons of No. 4 Fuel Oil	=	gallons of Re-refined Oil
(d)	Propane:	0.661971 *	gallons of Propane	=	gallons of Re-refined Oil
(e)	Butane:	0.7183098 *	gallons of Butane	=	gallons of Re-refined Oil

The total SO<sub>2</sub> emissions from plant 03310 shall be less than 59.40 tons per year.

YEAR: \_\_\_\_\_

Month	This Month			Previous 11 Months	12-Month Total
	Re-refined Oil Usage (gallons)	Re-refined Oil Equivalent (gallons)	Total Equivalent Re-refined Oil Usage (gallons)	Re-refined Oil Used + Re-refined Oil Equivalent (gallons)	Re-refined Oil used + Re-refined Oil Equivalent (gallons)

- 9 No deviation occurred in this quarter.  
 9 Deviation/s occurred in this quarter.  
 Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
 Title / Position: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Phone: \_\_\_\_\_

A certification is not required for this report.

**Indiana Department of Environmental Management  
Office of Air Quality**

**Addendum to the Technical Support Document for a  
Significant Permit Revision to a Federally Enforceable State Operating Permit**

<b>Source Name:</b>	Rieth-Riley Construction Company, Inc.
<b>Source Location:</b>	3425 O'Farrel Road, Lafayette, Indiana 47904
<b>County:</b>	Tippecanoe
<b>SIC Code:</b>	2951
<b>Operation Permit No.:</b>	F 157-5448-03286
<b>Operation Permit Issuance Date:</b>	December 11, 1996
<b>Significant Permit Revision No.:</b>	SPR 157-13666-03286
<b>Permit Reviewer:</b>	SDF

On February 5, 2001, the Office of Air Quality (OAQ) had a notice published in the Lafayette Journal and Courier stating that Rieth-Riley Construction Company, Inc. had applied for a significant permit revision to a Federally Enforceable State Operating Permit (FESOP), for a modification consisting of a changing the fuel used at the aggregate dryer of plant 157-03310 from natural gas as the primary fuel to re-refined oil as the primary fuel, with backup fuels of No. 2 and No. 4 distillate oils, propane, butane, and natural gas. The notice also stated that OAQ proposed to issue a permit for this modification and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On March 5, 2001, OAQ had a notice published in the Lafayette Journal and Courier that a public hearing would be held on the proposed permit at 7:00 p.m on March 20, 2001 in the Large Council Chambers of Lafayette City Hall, 20 North 6<sup>th</sup> Street in Lafayette, Indiana 47901. About 90 people attended the hearing, and 13 people made comments at the hearing.

The summary of the comments and corresponding responses appear below. Since many of the comments are similar in nature they have been grouped together for one response.

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**Comment 1:** Douglas and Sheryl Strand

Douglas and Sheryl Strand submitted comments reflecting their concerns about the fugitive emissions that are generated by Rieth-Riley. They mentioned that they observed clouds coming from the source that they felt violated existing opacity rules and that these clouds may be heavily laden with sulfur dioxide and other pollutants. The Strands also commented that they found droplets and staining from droplets on the surfaces of their vehicles, and, on occasion, a white residue that appears on the individual blades of grass in their lawn.

Douglas and Sheryl Strand wish to know what can be and is going to be done about the fugitive emissions from Rieth-Riley.

**Response 1:**

The Office of Air Quality of Air Quality has established the limitations on emissions, a preventive maintenance plan, monitoring, and record keeping and reporting requirements based on state and federal law to minimize the emissions generated and prevent the source from creating a nuisance to properties surrounding the source.

Condition C.3 in the permit specifically addresses fugitive emissions citing that causing or allowing fugitive dust to visibly cross the boundary or property line is a violation of 326 IAC 6-4. Condition C.3 states, "The Permittee shall be in violation of 326 IAC 6-4 if any of the criteria specified in 326 IAC 6-4-2 (1) through (4) are violated." 326 IAC 6-4-2(4) specifically addresses the fugitive dust crossing the property line. Conditions C.1 and D.1.1 address opacity from process vents and stacks. Condition C.1.1 states, "Pursuant to 326 IAC 5-1-2 (Visible Emission Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following: (a) visible emissions shall not exceed an average of 40 percent opacity in 24 consecutive readings, (b) visible emissions shall not exceed 60 percent opacity for more than a cumulative total of 15 minutes (60 readings) in a 6 hour period." These conditions already exist in the permit and are enforceable, and are not part of this modification.

The Office of Air Quality inspects sources per U.S. EPA guidelines and whenever there are complaints made to OAQ. All inspections are unannounced. Should anyone suspect that a violation has occurred, he or she may inform the Office of Air Quality of the problem and request that an inspection be conducted to ensure that no violations have taken place.

Questions regarding violations and requests for inspections should be directed to the Office of Air Quality, OAQ, in writing to the Air Compliance Section 1, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or by calling (800) 451-6027, press 0 and asking for the Air Compliance Section 1.

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**Comment 2:** Douglas and Sheryl Strand, Gerald Littodine, Tony Roswarski, Gregory and Sheryl Gick, Senator Alting

Several people expressed their concern about the high levels of pollutants emitted by Rieth-Riley in conjunction with the high levels of emissions generated by A.E. Staley, and raised questions as to what affect the modification proposed by Rieth-Riley will have on health. A question was also raised as to what the combined emissions from A.E. Staley and Rieth-Riley were.

**Response 2:**

The Office of Air Quality uses a mathematical model to compare concentrations of any of the criteria pollutants at the plant's property line to the National Ambient Air Quality Standards (NAAQS). Additionally, the concentrations at the plant's property line can be compared to the OSHA Permissible Exposure Limits (PELs). This is further discussed in Response 4 of this TSD Addendum.

The actual emissions reported for A. E. Staley in 1999 and the allowable emissions per this permit for Rieth-Riley are listed as follows:

Process/facility	Potential to Emit (tons/year)					
	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>
A. E. Staley Actual Emissions (1999)	N/A	207	1310	609	65	499
Rieth-Riley Allowable Emissions	N/A	27.82	99	0.66	7.81	19.30
Total	N/A	235	1409	610	73	518

**Comment 3:** Tony Roswarski, Gregory and Sheryl Gick

Tony Roswarski and Gregory and Sheryl Gick submitted comments questioning the procedures for monitoring of the re-refined oil that is going to be combusted at the source.

**Response 3:**

Condition D.1.11 of the permit requires the owner or operator to keep a vendor analysis of fuel delivered and a certification that the fuel supplier analyses represent all of the fuel combusted during the period.

Condition D.1.14 consists of the re-refined oil requirements. This condition requires that the owner or operator meet the requirements specified in 329 IAC 13-8, including obtaining an EPA identification number as outlined in 329 IAC 13-8-3 for all used oil received, storing the used oil pursuant to the requirements of 329 IAC 13-8-5, and maintaining records of the re-refined oils used, pursuant to 329 IAC 13-8-6. In addition, Condition D.1.14 prohibits the burning of mixtures of used oil and hazardous waste that is regulated under 329 IAC 3.1.

In addition, the Indiana Department of Environmental Management (IDEM) inspectors can also collect a sample on site and have it analyzed by an IDEM contractor.

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**Comment 4:** Dean Catlow, P.E. Liley

Dean Catlow and P.E. Liley submitted comments questioning the effects the concentrations the emitted pollutants have on health and the environment and if any analysis of the concentrations are being done.

**Response 4:**

If it is a federal PSD permit, an ambient air quality analysis is required. This requires monitoring the local air to determine the pollution which may exist, then adding the emissions from the PSD permit in a computerized emission model, in order to demonstrate that the National Ambient Air Quality Standards (NAAQS) will not be exceeded if the PSD permit is approved. The NAAQS are used to develop the permit PTE limits and state rule limits which are enforced on a short term basis.

Air quality modeling is not generally done with smaller-level permits. The Office of Air Quality will model air quality when requested at a public hearing. Such a model was requested at the hearing. The results are listed below. All units for the tables are in micrograms per cubic meter.

**a. PM10:**

	Rieth-Riley	NAAQS Level
24 hour average	0.06	1.00
annual average	0.30	5.00

**b. SO<sub>2</sub>:**

	Rieth-Riley's Impact	NAAQS Level
3 hour average	1.4	1300
24 hour average	0.27	365
annual average	0.02	80

**c. NO<sub>2</sub>:**

	Rieth-Riley's Impact	NAAQS Level
annual average	0.37	100

**d. CO:**

	Rieth-Riley's Impact	NAAQS Level
1 hour average	1.4	3.4
8 hour average	3.4	500

**e. HAPs:**

HAPs	Predicted Impact	Percent of PEL
Formaldehyde	0.0097	<0.01%
Toluene	0.0028	<0.01%
Cobalt	0.0028	<0.01%
Nickel	0.0249	<0.01%
Phosphorous	0.0028	<0.01%

All of the HAPs for which there are emission factors were modeled. Many of the HAPs were determined to have emissions of less than 0.01 tons per year. These emissions were noted as being negligible and are not recorded on this table.

Further, it is noted that the HAP concentrations are determined based on unrestricted emissions generation and do not include any of the Office of Land Quality limited HAPs. Thus, the estimated concentrations are higher than will be allowed.

Other modeling for PM<sub>10</sub> was performed for A.E. Staley. The 24-hour average concentrations and annual average background, source, and modification concentrations for A.E. Staley in addition to the increased estimated concentrations for Rieth-Riley after the proposed modification, as compared to their respective standards, are as follows:

	24-hour average (ug/m3)	annual average (ug/m3)
Background	21.00	15.30
A.E. Staley's Highest Recorded Value	81.2	31.94
Rieth-Riley After Modification	0.06	0.30
<b>Total</b>	<b>102.26</b>	<b>47.54</b>

  

Standard	<b>150.00</b>	<b>50.00</b>
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The total 24-hour and annual averages have been compared to their respective standards. It is important to note that these average concentrations do not necessarily occur at the same time and that even when the model's total 24-hour and annual averages are totaled as if they occurred at the same time, the concentrations are below the respective NAAQ standards.

Rieth-Riley's impact on air quality after the modification will be very small. For criteria pollutants, the increased impact will not threaten the NAAQS established by the U.S. EPA to protect public health and welfare. While no such standards have been established for other pollutants that are listed as hazardous air pollutants (HAP), the Occupation, Health, and Safety Administration (OSHA) has established permissible exposure levels (PEL) for workplace exposure. The results of the Office of Air Quality analysis predicts air quality impacts of less than 0.01% of the PEL. While these PELs are not an ambient air quality standard, they are levels that can be used to indicate that public health is being maintained.

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**Comment 5:** Dean Catlow

Is Rieth-Riley willing to accept a restriction should anyone complain that they would immediately switch to clean burning fuel and/or shut the plant down?

**Response 5:**

The Office of Air Quality establishes limitations and other requirements based on state and federal law. The Office of Air Quality does not have the authority to unilaterally restrict operations based solely on complaints.

The Office of Air Quality does, however, have the authority to restrict operations and assess a penalty should a violation of any permit limits or requirements occur.

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**Comment 6:** Tony Roswarski, Senator Alting, Larry and Donna Giroux, David Goris, Brandt Burleson

Several people commented on how they were confused about Rieth-Riley emitting 100 tons per year and 247 tons per year.

**Response 6:**

The 247 tons/year value is the unrestricted potential to emit. The 100 tons/yr is the total limited potential to emit as defined by the terms of the permit.

“Unrestricted potential to emit” refers to emissions assuming 8760 hours of operation per year at maximum capacity without controls. These numbers are useful for determining rule applicability, but are often a poor indicator of actual emissions.

“Limited potential to emit” refers to emissions with operation as close to 8760 hours of operation per year at maximum capacity as possible after federally enforceable controls and limits are imposed such as a Federally Enforceable State Operating Permit (FESOP).

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**Comment 7:** Dean Catlow

I received your letter on 2/26/01 and I would appreciate that the concerned citizens have a clear understanding of the last sentence of the first paragraph “Said permit will contain limits and conditions that are necessary to meet the ambient air quality standards”. Does this mean that the pollutants shall not exceed ppm over an annual time frame or shall never exceed ppm at any given time. What steps will Rieth-Riley take to afterburn, etc, and should pollutants ever exceed the limits at any given time then what penalties will be imposed and enforced.

**Response 7:**

The National Ambient Air Quality Standards (NAAQS) are based and modeled on a short term 24-hour average and a long term annual average basis.

In addition, this permit establishes conditions necessary to comply with Indiana law such as the quality of oil to control the emissions of SO<sub>2</sub> and metals and the operation of the baghouse to control particulate matter.

Should the Office of Air Quality determine that a violation has occurred, said violation shall be referred to the Office of Enforcement. The Office of Enforcement will verify that a violation has occurred, determine what steps need to be taken to correct the problem, and incur the fines associated with the violation.

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**Comment 8:** Senator Alting, Stuart Boehning, Tony Roswarski, Doug Strand

Several people commented that Rieth-Riley has stated that the actual increase in SO<sub>2</sub> emissions will only be approximately 7 tons per year and if that is the case, they should be limited to that lower amount of emissions.

**Response 8:**

Rieth-Riley combusted 58,883,600 cubic feet of natural gas last year which equates to 414,673 gallons of re-refined oil. If they had burned oil for the entirety of last year, the emissions would have been as follows:

	(tons/year)					
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>
Proposed Plant	neg.	neg.	31.10	0.21	0.43	8.38



The worst case pollutant is sulfur dioxide (SO<sub>2</sub>). If the source had combusted re-refined oil last year, the SO<sub>2</sub> emissions would have been 31.10 tons per year or approximately one half of what they will be allowed to emit. This equates to an increase of approximately 31 tons SO<sub>2</sub>/yr.

Based upon the limited emissions for the source in order to maintain their FESOP status, the source would have had an additional 59 tons of sulfur dioxide emissions in the worst case.

The Office of Air Quality establishes limitations and other requirements based on state and federal law.

The Office of Air Quality does not have the authority to unilaterally impose more restrictive legal conditions.

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**Comment 9:** Tony Roswarski

Does Rieth-Riley have two plants and does each plant have a separate permit?

**Response 9:**

Rieth-Riley consists of two (2) stationary batch hot-mix asphalt plants, identification numbers are 157-03310 and 157-03286, which are separate plants with separate conditions applicable to each plant. However both plants are permitted under one FESOP, F157-5448-03286, issued on December 11, 1996. This FESOP limits both plants' potential to emit to minor source levels.

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**Comment 10:** Tony Roswarski

What is Rieth-Riley actually emitting and what are they allowed to emit?

**Response 10:**

The most recent data available, are the emissions from 1999. The data from 2000 are not due until July, 2001. Indiana law does not require these type of plants to report emissions of HAPs. The following is a summary of the actual emissions from both plants in 1999.

Process/facility	Actual Emissions (tons/year)						
	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Plant 157-03286 (Adjacent)	N/A	93.1	11.00	4.00	6.00	5.00	N/A
Plant 157-03310 (Adjacent)	N/A	N/A	4.00	1.00	2.00	2.00	N/A
Total	N/A	93.10	15.00	5.00	8.00	7.00	N/A

N/A = Not Available

The following table lists the allowable emissions; after controls, after all limitations.

	Potential to Emit (tons/year)						
Process/facility	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Plant 157-03286 (Adjacent)	64.67	13.02	39.60	0.26	3.11	7.73	3.96
Plant 157-03310 (Adjacent)	73.49	14.80	59.40	0.40	4.70	11.57	5.88
Total	138.16	27.82	99.00	0.66	7.81	19.30	9.84

**Comment 11:** Tony Roswarski

What assurance is provided regarding the quality of the oil combusted?

**Response 11:**

The permit issued by the Office of Land Quality regulates oil being delivered to the refinery. The air permit issued by the Office of Air Quality regulates the oil after it has been re-refined.

The Office of Land Quality permit does allow refineries to accept, store, and re-refine used and waste oils, but the permit limits the amount of hazardous constituents that can be in the used or waste oil coming to the refinery. All sources providing used or waste oils to the refinery must certify that the incoming oil has been sampled and tested, and that the incoming oil contains hazardous constituents less than the levels established in the refinery's Office of Land Quality permit.

In addition, the refinery periodically samples and tests incoming oil to verify that the certifications provided by the used and waste oil suppliers are valid. The refinery keeps records of these audits on site. Should the refinery determine that the supplier is not providing valid certifications, the refinery will not process the oil and report such findings to the Office of Land Quality. IDEM determines compliance by inspecting the source and reviewing the refinery audits.

The air permit contains conditions that regulate the re-refined oil leaving the refinery. Condition D.1.14 defines what constituents can be in the re-refined oil coming from the refinery by limiting the constituents to the levels specified by EPA and in 329 IAC 13-8.

To demonstrate that the oil received by Rieth-Riley is re-refined oil, Rieth-Riley is required to obtain an EPA identification number and keep a copy of an analysis of all used oil received from the refinery. The source is also required to store the used oil as required in 329 IAC 13-8-5, and is prohibited from burning of mixtures of used oil and hazardous waste that is regulated under 329 IAC 3.1. IDEM determines compliance with these requirements by inspecting the source and reviewing the records kept by Rieth-Riley.

**Comment 12:** Tony Roswarski

Are PM and SO<sub>2</sub> stack testing required?

**Response 12:**

No stack testing is required for SO<sub>2</sub>. The production limit set for the plant was based on a higher percentage of sulfur in fuel than what would normally be used for this type of oil. For checking the SO<sub>2</sub> content of the oil, IDEM can collect an oil sample and then have it analyzed to demonstrate compliance.

However, Condition D.1.6 does require initial PM and PM<sub>10</sub> testing with subsequent testing every five years after the initial test.

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**Comment 13:** Tony Roswarski

If we only test once every five years and we allow an independent source to monitor the waste oil, then during the whole period IDEM is relying on either the company itself or another company to furnish them with the information to ensure these people in their neighborhoods that people are in compliance?

**Response 13:**

The Office of Air Quality has 26 air inspectors who inspect all the emission sources in Indiana, not including nine asbestos inspectors and six compliance testing specialists who also do field work. The Office of Water Quality (OWQ), the Office of Land Quality (OLQ), and the cities of Evansville, Hammond, and Indianapolis have their own inspection personnel. If necessary, these inspectors can collect a sample of the oil and have it analyzed.

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**Comment 14:** Larry Giroux

I understand that through the Governor's workings with the young children that a monitoring of the 2.5 was set up here in town and it is one of our fire stations down next to St. Elizabeth. Would it be possible for us to get some kind of readings off of that and you explain to us what is going on with that?

**Response 14:**

The Office of Air Quality has been monitoring PM<sub>2.5</sub> in Lafayette. The monitor is located at Fire Station #2, 800 Erie Street. This location is directly across from St. Elizabeth's Hospital. The sampler is a Rupprecht and Patashnick Plus Model 2025 Sequential Air Sampler which obtains measurements every three days. To date, the Office of Air Quality has data for 1999 and 2000. The following is a list of the results:

	1999	2000	24 hr. Standard (ug/m <sup>3</sup> )
Highest 24 Hr Value (ug/m <sup>3</sup> )	39.9	34.0	65

  

	1999	2000	Annual Standard (ug/m <sup>3</sup> )
Annual Average (ug/m <sup>3</sup> )	15.0	14.7	15

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**Comment 15:** Larry Giroux

How do emissions leave Rieth-Riley?

**Response 15:**

The emissions are exhausted through two stacks; SV1 and SV1a. The heights are 32 feet and 38 feet, respectively.

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**Comment 16:** David Goris

Once this permit is in effect, how long is it in effect and how long are we guaranteed that this maximum 100 tons is the limit? Can this change in a year? Can this be repetitioned in six months? What is our guarantee?

**Response 16:**

As noted, the FESOP was issued on December 11, 1996. The permit term is five years. This permit will have to be renewed this year. In regards to changes to the permit, the regulations do not place any requirements on an emission source to wait a certain amount of time after receiving a permit before applying for a modification to the permit. However, they do provide for the combining of permit applications if an applicant is submitting applications in parallel. Per EPA guidelines, all permit applications received within one year of each other are reviewed to see if they are related.

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**Comment 17:** Brandt Burleson

Does number 4 fuel oil put out less pollutants per year than number one or two and are these numbers correct?

**Response 17:**

The following table is a summary of the emission amounts for the various criteria pollutants for both #2 and #4 fuel oils.

tons/yr	PM	PM-10	SO2	Nox	VOC	CO	HAP
#2	4.8	7.9	169	47.6	0.8	11.9	0.24
#4	15.8	15.8	169	45	0.5	11.2	0.24

Depending upon which pollutant one wants to examine, #4 fuel oil may be determined to put out more or less pollution than #2 fuel oil. For PM, #4 fuel oil emits more. For VOC, #4 fuel oil emits less. So it depends on what baseline one uses, as to whether #4 fuel oil emits more of a given pollutant than #2 fuel oil.

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**Comment 18:** Brandt Burleson

Isn't it a fact that the use of such computer models are inherently limited because their output is totally determined by the assumptions on which they are based?

**Response 18:**

A computer model is a mathematical simulation of reality. The model does depend upon the parameters established in the creation of that model. The U.S. EPA has established the "Guidelines on Air Quality Monitoring" to address these issues. The model contains dispersion coefficients and other mathematical relationships that are used along with input data to predict impacts on air quality. The input data includes information on the source, five years of meteorological data, and specified locations at which to predict air quality impacts. The U.S. EPA has validated these models as providing conservative estimates of a source's impact and are accepted tools of air quality planning.

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**Comment 19:** Brandt Burleson, Doug Paprocki

Brandt Burleson and Doug Paprocki raised the question as to what waste oil is and why the term waste oil is used in the permit.

**Response 19:**

The term waste oil should not have been used. The correct term is re-refined oil. The permit and TSD have been corrected to reflect these changes.

Waste oil and re-refined oil are not the same thing.

Pursuant to 329 IAC 13 and 40 CFR 279, any oil that has constituent levels less than the following is considered "not" a waste oil, but used oil.

Constituent or Property	Allowable Level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Flash Point	100 Degree F minimum
Total Halogens	4,000 ppm maximum

Waste oil is re-refined to meet the above thresholds. Once the oil has once again gone through the refining process such that it meets the above specifications, the oil becomes re-refined oil. Re-refined oil will be combusted at Rieth-Riley.

If we were to take the maximum metal levels above and put them into the terms of an emission factor, those results are found in the second column of the table below. If we take the emission factor information from AP-42 for metal emissions from #2 fuel oil, those factors are shown in the third column of the table below.

Metal	Used oil (lb/ 1000 gal.)	#2 fuel oil ( lb/ 1000 gal.)
Arsenic	0.03525	0.00056
Cadmium	0.0141	0.00042
Chromium	0.0705	0.00042
Lead	0.705	0.00126

This comparison shows that the emission factors for #2 fuel oil are much less than the maximum levels of used oil, if those levels were calculated out to be emission factors.

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**Comment 20:** Doug Paprocki

Used oil has traces of a number of heavy metals, I think it was mentioned earlier, that are significantly higher in amount than virgin crude oil. And there are a number of compounds in addition that get added into the oil as it circulates in a engine. And EPA once considered listing used engine oil as a hazardous waste. Are the hazardous materials and compounds removed from the oil proposed for fuel here as part of the re-refining or do they go up and out in the environment along with SO<sub>2</sub> and the other waste gases?

**Response 20:**

The re-refined oil must be below the previously mentioned thresholds specified in 326 IAC 13 and 40 CFR 279 before the fuel can be combusted. The emissions from the fuels will be exhausted through stack SV1a. However, not all of each constituent will be emitted into the atmosphere. The following table lists the estimated unrestricted potential combined HAP emissions.

	Waste Oil tons/yr	No. 1 / 2 tons/yr	No. 4 tons/yr	NG tons/yr	Propane tons/yr	Butane tons/yr
Combined HAPs	0.24	0.24	0.24	neg.	neg.	neg.

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**Comment 21:** Doug Strand

Doug Strand questioned if the Office of Air Quality is taking into account only the emissions generated from combustion or all emissions generated from all emission points evaluated.

**Response 21:**

The combustion emissions and emissions generated from asphalt processing are estimated separately as well as the other sources of emissions such as conveying, handling, and transporting. The Office of Air Quality takes into account all criteria and hazardous air pollutant emissions from each source of emissions at the plant.

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**Comment 22:** Sharon Leingang

Every night I have to clean my porch, I have to clean the table. We have thrown away all of our lawn furniture this past fall after having it for one season because it is so thick with dust we can't get it off.

**Response 22:**

The Office of Air Quality of Air Quality has established the limitations on emissions, a preventive maintenance plan, monitoring, and record keeping and reporting requirements based on state and federal law to minimize the emissions generated and ensure compliance with environmental law.

Condition C.3 in the permit specifically addresses fugitive emissions citing that causing or allowing fugitive dust to visibly cross the boundary or property line is a violation of 326 IAC 6-4. Condition C.3 states, "The Permittee shall be in violation of 326 IAC 6-4 if any of the criteria specified in 326 IAC 6-4-2 (1) through (4) are violated." 326 IAC 6-4-2(4) specifically addresses the fugitive dust crossing the property line.

The Office of Air Quality inspects sources per U.S. EPA guidelines and whenever there are complaints made to OAQ. All inspections are unannounced. Should anyone determine that a violation has occurred, he or she may inform the Office of Air Quality of the problem and request that an inspection be conducted to ensure that no violations have taken place.

Questions regarding violations and requests for inspections should be directed to the Office of Air Quality, OAQ, in writing to the Air Compliance Section 1, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or by calling (800) 451-6027, press 0 and asking for the Air Compliance Section 1.

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**Comment 23:** Sharon Leingang

I have a son now with chronic lung problems and one that has heart problems that has never had any problems in his life.

**Response 23:**

The Office of Air Quality's review indicates that the impact of Rieth Riley's emissions on ambient air quality is very small and will not threaten the National Ambient Air Quality Standards (NAAQS). These standards are established by the U.S. EPA to protect public health and welfare.

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**Comment 24:**

Several people stated their concerns about noise, vibrations, odors, property values, and wondered how the issuance of the Rieth-Riley permit would affect their quality of life.

#### **Response 24:**

Numerous other comments and concerns, many related to quality of life issues, were raised at the public hearing and expressed in written comments to the OAQ. Some of issues related to noise, vibrations, odor, truck traffic, property values and local zoning issues. OAQ recognizes that these concerns are important to those who expressed them; however, they do not have a direct impact on how the Office of Air Quality reviews and makes decisions on air permit applications. The OAQ advises residents to contact their local officials regarding these issues. OAQ's permit review by law cannot address issues for which it does not have direct regulatory authority.

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On May 8, 2001, the Office of Air Quality (OAQ) received comments from Laurence A. McHugh, an attorney representing Rieth-Riley Construction Company, Inc., regarding Significant Permit Revision 157-13666-03286. The following is a list of the comments and the respective responses.

#### **Comment 1:**

Condition D.1.6 (Page 24 of 32 of the permit and Pages 23-24 of 35 of the TSD) contains two subsections which require PM and PM10 testing and two different time tables (one between 18 - 24 months after issuance and one between 30 - 36 months after issuance). This is duplicative information.

#### **Response 1:**

40 CFR 60, Subpart I requires an initial performance test for the aggregate dryer as required in Part 60.8. Pursuant 60.8(a), the initial performance test shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, but not later than 180 days after initial start-up, while burning re-refined oil.

Paragraph (a) and (b) both require the same tests but at different time frames. Therefore, paragraph (a) of Condition D.1.6 shall be removed and the time frame specified in 60.8 shall be required.

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#### **Comment 2:**

With regard to testing for compliance with the NSPS in 40 CFR 60, Subpart I, that provision only requires an initial performance test followed by opacity monitoring. At least one of these dryers was tested on May 26, 1998, and achieved a particulate loading of less than 0.2 grains/dscf with an opacity of 0.

#### **Response 2:**

The NSPS requires that the aggregate dryer that has been modified be tested (the aggregate dryer of Plant 03310). Condition D.1.6 requires the Permittee to conduct testing utilizing the methods specified or other methods approved by the Commissioner. The change in fuel is considered a New Source Performance Standard (NSPS) modification. This modification re-triggers the requirement for a compliance test. Thus, no changes to the condition are required.

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### Comment 3:

The testing requirement of Condition D.1.6 requires testing every five (5) years. If the initial tests indicate that the dryers are well under the PM<sub>10</sub> limits, it would be reasonable to impose only surrogate monitoring rather than repeat testing. As I explained to you, the requirement for the 5 year repeat test will not kick in until after a new permit is issued, so it is probably meaningless. Nevertheless, when it comes time to renew the permit, Rieth-Riley might well want to object to additional testing based on the results of the first stack tests and does not want to be met by the argument that we accepted this condition in this modification.

### Response 3:

The Office of Air Quality has established periodic stack testing and parametric monitoring of control devices as a means of demonstrating that emission units are in compliance on a more or less continuous basis. For asphalt plants, once per shift monitoring of the control devices are related to stack tests performed on a five year schedule.

The Office of Air Quality understands that the permit will be up for renewal before the next stack test is required. Upon renewal of the FESOP, the Office of Air Quality will determine if additional stack testing is required. However, there may be unforeseen circumstances that prevent the IDEM from acting on a timely application for renewal. State law provides that the current permit will remain in force. This condition would keep the current five year schedule in force as well.

Thus, the five year testing requirement shall remain in the permit.

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The following changes have been made to condition D.1.6 as a result of the comments. All items deleted are in strike-out format, and all additional language is in bold type.

### Testing requirements [326 IAC 2-8-4(3)]

#### D.1.46 Performance Testing [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

~~Between 540 days to 720 days of the issuance of this permit, the Permittee shall perform PM and PM<sub>10</sub> testing utilizing methods per 40 CFR 60 Appendix A, Method 5, 17, 40 CFR Part 51 Appendix M, Method 201, 201a, 202, as approved by the Commissioner to demonstrate compliance with Condition D.1.1 and D.1.2. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensible PM<sub>10</sub>.~~

**Within 60 days after achieving the maximum production rate at which the aggregate dryer will be operated using re-refined oil, but not later than 180 days after initial startup using re-refined oil, the Permittee shall perform PM and PM<sub>10</sub> testing utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM<sub>10</sub>, or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensible PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing.**

**Indiana Department of Environmental Management  
Office of Air Quality**

**Technical Support Document (TSD) for a Significant Permit Revision to a  
Federally Enforceable State Operating Permit**

**Source Background and Description**

<b>Source Name:</b>	<b>Rieth-Riley Construction Company, Inc.</b>
<b>Source Location:</b>	<b>3425 O'Farrel Road, Lafayette, Indiana 47904</b>
<b>County:</b>	<b>Tippecanoe</b>
<b>SIC Code:</b>	<b>2951</b>
<b>Operation Permit No.:</b>	<b>F 157-5448-03286</b>
<b>Operation Permit Issuance Date:</b>	<b>December 11, 1996</b>
<b>Significant Permit Revision No.:</b>	<b>SPR 157-13666-03286</b>
<b>Permit Reviewer:</b>	<b>SDF</b>

The Office of Air Quality (OAQ) has reviewed a revision application from Rieth-Riley Construction Company, Inc. relating to the construction and operation of the following emission units and pollution control devices:

- (a) One (1) aggregate dryer with a maximum capacity of 225 tons per hour, having a burner with a maximum heat input rate of 75.0 million British thermal units per hour, exhausting through a baghouse at stack SV1a. The burner is fired by re-refined oil, with backup fuels of No. 2 and No. 4 distillate oils, propane, butane and natural gas.
- (b) Two (1) above ground storage tanks, identified as Tank 16A and 16B, constructed in 1978 and 1979, respectively, each storing re-refined oil with capacities of 12,500 and 8,000 gallons, respectively.

These emission units were previously existing and permitted at this source, but require approvals because of the change in primary fuel from natural gas to re-refined oil and the addition of backup fuels.

**History**

On December 27, 2000, Rieth-Riley Construction Company, Inc. submitted an application to the OAQ requesting to change the primary fuel at the dryer burner for plant 157-03310 from natural gas to re-refined oil and to add backup fuels to the dryer burner. Rieth-Riley Construction Company, was issued a Federally Enforceable State Operating Permit (FESOP) (F157-5448-03286) on December 11, 1996. The following changes have been made since issuance:

- (a) The First Administrative Amendment (AAF 157-10038) was issued on August 31, 1998.
- (b) The First Significant Revision (157-12074) was issued on July 17, 2000.
- (c) The Second Administrative Amendment (157-12490) was issued on September 27, 2000.

**Source Definition**

This source consists of two (2) stationary batch hot-mix asphalt plants. These two (2) plants were determined to be a single source. The plant identification numbers are 157-03310 and 157-03286. Both plants are permitted under the FESOP, F157-5448-03286, issued on December 11, 1996. This modification is to plant 157-03310.

## Enforcement Issue

There are no enforcement actions pending.

## Recommendation

The staff recommends to the Commissioner that the FESOP Significant Permit Revision be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application submitted by the applicant.

An application for the purposes of this review was received on December 27, 2000.

## Emission Calculations

### 1. POTENTIAL TO EMIT AT PLANT 03310 AFTER THE PROPOSED MODIFICATION:

#### A. DRYER COMBUSTION EMISSIONS:

##### Natural Gas:

The following calculations determine the PTE based on natural gas combustion, a maximum capacity of 75 MMBtu/hr, emissions before controls, AP-42 emission factors (Tables 1.4-1, 1.4-2, 1.4-3), 8760 hours/yr, and 1000 Btu/cf:

$$75 \text{ MMBtu/hr} * 8760 \text{ hr/yr} * 1 \text{ E6 Btu/MMBtu} * 1/1000 \text{ cf/Btu} * 1/1\text{E6 MMcf/cf} * \text{Ef lb poll/MMcf} * 1/2000 \text{ ton poll/lb poll} = \text{ton poll/yr}$$

	PM 1.9 lb/MMcf	PM10 7.6 lb/MMcf	SO2 0.6 lb/MMcf	NOx 100 lb/MMcf	VOC 5.5 lb/MMcf	CO 84 lb/MMcf
ton/yr	0.62	2.50	0.20	32.85	1.81	27.59

##### No. 1 and No. 2 Fuel Oil:

The following calculations determine the PTE based on No. 1 and No. 2 fuel oil combustion, a maximum capacity of 75 MMBtu/hr, emissions before controls, AP-42 emission factors (Tables 1.3-1, 1.3-2, 1.3-3), 8760 hours/yr, and 138,000 Btu/gal:

The sulfur content used for No. 1 and No.2 fuel oil is based on the equivalent sulfur content derived from the applicable 326 IAC 7-1.1-1 limitation of 0.5 lb SO2/MMBtu.

$$0.5 \text{ lb SO2/MMBtu} * 1 \text{ MMBtu/1 E6 Btu} * 138000 \text{ Btu/gal} * 1000 \text{ gal/Tgal} * 1/142 \text{ Tgal/lb} = 0.5 \% \text{ sulfur content}$$

The following calculations determine the PTE.

$$75 \text{ MMBtu/hr} * 8760 \text{ hr/yr} * 1\text{E6 BTU/MMBtu} * 1/138000 \text{ gal/Btu} * 1/1000 \text{ Tgal/gal} * \text{Ef lb Poll/Tgal} * 1/2000 \text{ ton Poll/lb Poll} = \text{ton Poll/yr}$$

	PM 2.0 lb/Tgal	PM10 3.3 lb/Tgal	SO2 71 lb/Tgal	NOx 20 lb/Tgal	VOC 0.34 lb/Tgal	CO 5.00 lb/Tgal
ton/yr	4.76	7.85	168.98	47.60	0.81	11.90

#### No. 4 Fuel Oil:

The following calculations determine the PTE based on No. 4 fuel oil combustion, a maximum capacity of 75 MMBtu/hr, emissions before controls, AP-42 emission factors (Tables 1.3-1, 1.3-2, 1.3-3), 8760 hours/yr, and 146,000 Btu/gal:

The sulfur content used for No. 4 fuel oil is based on the equivalent sulfur content derived from the applicable 326 IAC 7-1.1-1 limitation of 0.5 lb SO2/MMBtu.

$0.5 \text{ lb SO}_2/\text{MMBtu} * 1 \text{ MMBtu}/1 \text{ E6 Btu} * 146000 \text{ Btu/gal} * 1000 \text{ gal/Tgal} * 1/142 \text{ Tgal/lb} = 0.5 \% \text{ sulfur content}$

The following calculations determine the PTE.

$75 \text{ MMBtu/hr} * 8760 \text{ hr/yr} * 1\text{E6 BTU/MMBtu} * 1/146000 \text{ gal/Btu} * 1/1000 \text{ Tgal/gal} * \text{Ef lb Poll/Tgal} * 1/2000 \text{ ton Poll/lb Poll} = \text{ton Poll/yr}$

	PM 7.0 lb/Tgal	PM10 7.0 lb/Tgal	SO2 75 lb/Tgal	NOx 20 lb/Tgal	VOC 0.25 lb/Tgal	CO 5 lb/Tgal
ton/yr	15.75	15.75	168.75	45.00	0.56	11.25

#### Re-refined Oil:

The following calculations determine the PTE based on re-refined oil combustion, a maximum capacity of 75 MMBtu/hr, emissions before controls, AP-42, Chapter 1.11 emission factors, 8760 hours/yr, 142,000 Btu/gal, a maximum ash content of 0.5%, and a maximum lead content of 0.015%:

The sulfur content used for re-refined oil is based on the equivalent sulfur content derived from the applicable 326 IAC 7-1.1-1 limitation of 1.6 lb SO2/MMBtu.

$1.6 \text{ lb SO}_2/\text{MMBtu} * 1 \text{ MMBtu}/1 \text{ E6 Btu} * 142000 \text{ Btu/gal} * 1000 \text{ gal/Tgal} * 1/107 \text{ Tgal/lb} = 2.1 \% \text{ sulfur content}$

Although the sulfur content required to meet the requirements of 326 IAC 7 are 2.1%, Rieth Riley has requested a limit of 1% sulfur content for the re-refined oil. Thus, the sulfur content used to determine the re-refined oil combustion PTE is based on a sulfur content of 1%.

The following calculations determine the PTE.

$75 \text{ MMBtu/hr} * 8760 \text{ hr/yr} * 1\text{E6 BTU/MMBtu} * 1/142000 \text{ gal/Btu} * 1/1000 \text{ Tgal/gal} * \text{Ef lb Poll/Tgal} * 1/2000 \text{ ton Poll/lb Poll} = \text{ton Poll/yr}$

	PM 33.0 lb/Tgal	PM10 28.5 lb/Tgal	SO2 150 lb/Tgal*	NOx 16.0 lb/Tgal	VOC 1.0 lb/Tgal	CO 2.10 lb/Tgal
ton/yr	76.23	65.84	346.50	36.96	2.31	4.85

Due to the poor rating given to the waste oil emission factors (D rating), the more reliable factor of No. 4 fuel oil, 150 lb/Tgal (A rating) was used.

#### Propane:

The following calculations determine the PTE based on propane combustion, a maximum capacity of 75 MMBtu/hr, emissions before controls, AP-42 (supplement B 10/96), Table 1.5-1 emission factors, 8760 hours/yr, 94,000 Btu/gal, and a maximum sulfur content of 0.1%:

$$75 \text{ MMBtu/hr} * 8760 \text{ hr/yr} * 1\text{E}6 \text{ BTU/MMBtu} * 1/94000 \text{ gal/Btu} * 1/1000 \text{ Tgal/gal} * \text{Ef lb Poll/Tgal} * 1/2000 \text{ ton Poll/lb Poll} = \text{ton Poll/yr}$$

	PM 0.6 lb/Tgal	PM10 0.6 lb/Tgal	SO2 0.01lb/Tgal	NOx 19.0 lb/Tgal	VOC 0.5 lb/Tgal	CO 3.20 lb/Tgal
ton/yr	2.09	2.09	0.03	66.31	1.75	11.17

#### Butane:

The following calculations determine the PTE based on butane combustion, a maximum capacity of 75 MMBtu/hr, emissions before controls, AP-42, Chapter 1.4 emission factors, 8760 hours/yr, and 102,000 Btu/gal:

$$75 \text{ MMBtu/hr} * 8760 \text{ hr/yr} * 1\text{E}6 \text{ BTU/MMBtu} * 1/102000 \text{ gal/Btu} * 1/1000 \text{ Tgal/gal} * \text{Ef lb Poll/Tgal} * 1/2000 \text{ ton Poll/lb Poll} = \text{ton Poll/yr}$$

	PM 0.6 lb/Tgal	PM10 0.6 lb/Tgal	SO2 0.02 lb/Tgal	NOx 21.0 lb/Tgal	VOC 0.4 lb/Tgal	CO 3.60 lb/Tgal
ton/yr	1.93	1.93	0.06	67.21	1.29	11.59

#### Dryer Combustion Emissions Summary:

	PM	PM10	SO2	NOx	VOC	CO
Nat. Gas	0.62	2.50	0.20	32.85	1.81	<b>27.59</b>
No. 1, No. 2	4.76	7.85	168.98	47.60	0.81	11.90
No. 4	15.75	15.75	168.75	45.00	0.56	11.25
Re-refined Oil	<b>76.23</b>	<b>65.84</b>	<b>346.50</b>	36.96	<b>2.31</b>	4.85
Propane	2.09	2.09	0.03	66.31	1.75	11.17
Butane	1.93	1.93	0.06	<b>67.21</b>	1.29	11.59

#### B. AGGREGATE DRYING: BATCH MIX PLANT:

The following calculations determine the PTE based on a maximum capacity of 225 ton/hr, emissions before controls, AP-42 emission factors (SCC# 3-05-002-05), and 8760 hours/yr.

$$225 \text{ ton/hr} * 8760 \text{ hr/yr} * \text{Ef lb poll/ton} * 1/2000 \text{ ton poll/lb poll} = \text{ton poll/yr}$$

lb/ton	PM 32	PM10 4.5	SO2 none	NOx none	VOC none	CO none	Lead 3.3 E-6	HAPS 0.0058
ton/yr	31536	4434.75	0.00	0.00	0.00	0.00	neg.	5.72

### C. CONVEYING:

The following calculations determine the PTE based on a maximum capacity of 216 ton/hr, emissions before controls, AP-42 emission factors, Chapter 11.19.2, and 8760 hours/yr.

$$Ef = 0.0032 \quad (U/5)^{1.3} * k = 0.0183 \text{ lb/ton}$$

where: k = 1 (particle size multiplier)  
U = 12 mean wind speed (worst case)  
M = 1.3 % moisture

$$\begin{aligned} \text{PM: } 0.183 \text{ lb/ton} * 216 \text{ ton/hr} * 8760 \text{ hr/yr} * 1/2000 \text{ ton/lb} &= \mathbf{17.27 \text{ ton/yr}} \\ \text{PM10: } 10\% \text{ PM} &= \mathbf{1.73 \text{ ton/yr}} \end{aligned}$$

### D. UNPAVED ROADS:

The following calculations determine the PTE based on use of unpaved roads, emissions before controls, 8760 hr/yr, and AP-42 emission factors (Chapter 11.2.1).

#### Tri-axle Truck:

$$22.5 \text{ trips/hr} * 0.124 \text{ mile/roundtrip} * 8760 \text{ hr/yr} = 24440.40 \text{ mi/yr}$$

$$Ef = k * 5.9 * (s/12) * (S/30) * (W/3)^{0.7} * (w/4)^{0.5} * ((365-p)/365) = \text{lb PM/mi} = 3.22 \text{ lb PM/ mi}$$

where: k = 0.8 (particle size multiplier)  
s = 4.8 (% silt content of unpaved roads)  
p = 125 (days of rain greater than or equal to 0.01 inches)  
S = 10 (mi/hr vehicle speed)  
W = 23 (tons average vehicle wt)  
w = 14 (wheels)

$$\begin{aligned} \text{PM: } 3.22 \text{ lb PM/mi} * 24440.40 \text{ mi/yr} * 1/2000 \text{ ton/lb} &= \mathbf{39.37 \text{ ton PM/yr}} \\ \text{PM10: } 35\% \text{ PM} &= \mathbf{13.78 \text{ ton PM10/yr}} \end{aligned}$$

#### Front End Loader:

$$38.8 \text{ trip/hr} * 0.056 \text{ mi/roundtrip} * 8760 \text{ hr/yr} = 19033.73 \text{ mi/yr}$$

$$Ef = k * 5.9 * (s/12) * (S/30) * (W/3)^{0.7} * (w/4)^{0.5} * ((365-p)/365) = \text{lb PM/mi} = 0.99 \text{ lb PM/mi}$$

where: k = 0.8 (particle size multiplier)  
s = 4.8 (% silt content of unpaved roads)  
p = 125 (days of rain greater than or equal to 0.01 inches)  
S = 6 (mi/hr vehicle speed)  
W = 22 (tons average vehicle wt)  
w = 4 (wheels)

$$\begin{aligned} \text{PM: } & 0.99 \text{ lb PM/mi} * 19033.73 \text{ mi/yr} * 1/2000 \text{ ton/lb} = \mathbf{9.38 \text{ ton PM/yr}} \\ \text{PM10: } & 35\% \text{ PM} = \mathbf{3.28 \text{ ton PM10/yr}} \end{aligned}$$

#### E. STORAGE:

The following calculations determine the storage pile emissions based on emissions before controls, 8760 hr/yr, and AP-42 emission factors (Chapter 11.2.3).

$$\begin{aligned} \text{Ef} &= 1.7 * (s/1.5) * (365 - p)/235 * (f/15) & p &= 125 \text{ days rain } \geq 0.01 \text{ in} \\ &= 1.27 \text{ lb/acre/day for sand} & (s &= 1.1\% \text{ silt}) & f &= 15\% \text{ of wind } \geq 12 \text{ mph} \\ &= 1.39 \text{ lb/acre/day for stone} & (s &= 1.2\% \text{ silt}) \\ &= 1.16 \text{ lb/acre/day for slag} & (s &= 1.0\% \text{ silt}) \\ &= 1.16 \text{ lb/acre/day for gravel} & (s &= 1.0\% \text{ silt}) \\ &= 0.93 \text{ lb/acre/day for RAP} & (s &= 0.8\% \text{ silt}) \end{aligned}$$

$$\begin{aligned} \text{Ep (storage)} &= \text{Ef} * \text{sc} * (20 \text{ cuft/ton}) * 365 \text{ day/yr} * 1/2000 \text{ ton/lb} * 1/43560 \text{ acre/sft} * 1/25 \text{ ft} \\ &= 0.09 \text{ ton PM/yr sand} & (20,000 \text{ tons storage capacity}) \\ &= 0.28 \text{ ton PM/yr stone} & (60,000 \text{ tons storage capacity}) \\ &= 0.00 \text{ ton PM/yr slag} & (\text{no slag}) \\ &= 0.04 \text{ ton PM/yr gravel} & (10,000 \text{ tons storage capacity}) \\ &= \mathbf{0.16 \text{ ton PM/yr RAP}} & (50,000 \text{ tons storage capacity}) \\ &= \mathbf{0.56 \text{ ton PM/yr}} \end{aligned}$$

$$\text{PM10} = 35\% \text{ PM}$$

$$\begin{aligned} &= 0.03 \text{ ton PM10/yr sand} \\ &= 0.10 \text{ ton PM10/yr stone} \\ &= 0.00 \text{ ton PM10/yr slag} \\ &= 0.01 \text{ ton PM10/yr gravel} \\ &= \mathbf{0.05 \text{ ton PM10/yr RAP}} \\ &= \mathbf{0.19 \text{ ton PM10/yr}} \end{aligned}$$

#### SUMMARY OF UNRESTRICTED PTE FROM PLANT 03310:

	PM	PM10	SO2	NOx	VOC	CO
Dryer Combustion*	76.23	65.84	346.50	67.21	2.31	27.59
Dryer	31536.00	4434.75	-	-	-	-
Conveying	17.27	1.73	-	-	-	-
UR Triaxle	39.37	13.78	-	-	-	-
UR Front End Loader	9.38	3.28	-	-	-	-
Storage	0.56	0.19	-	-	-	-
<b>Total</b>	<b>31678.81</b>	<b>4519.57</b>	<b>346.50</b>	<b>67.21</b>	<b>2.31</b>	<b>27.59</b>

\* Based on worst case emissions from any of the fuels combusted in the dryer.

## 2. INCREASED PTE DUE TO THE MODIFICATION AT PLANT 03310:

The increase in PTE due to the modification is the difference of the source PTE after the modification and the source PTE before the modification. The following table summarizes these emissions.

Source PTE After the Mod. - Source PTE Before the Mod. = PTE Due to the Mod.

	Source PTE After Mod. Ton/yr	Source PTE Before Mod. Ton/yr	PTE Due to Mod. Ton/yr
PM	31678.81	31625.97	<b>52.84</b>
PM10	4519.57	4477.13	<b>42.44</b>
SO2	346.50	0.20	<b>346.30</b>
VOC	2.31	1.99	<b>0.32</b>
CO	27.59	12.63	<b>14.96</b>
NOx	67.21	67.21	<b>0.00</b>
Total HAP	5.88	5.72	<b>0.16</b>

## 3. POTENTIAL EMISSIONS AFTER CONTROLS AT PLANT 03310:

### A. DRYER EMISSIONS:

The particulate matter (PM) and PM10 emissions from the dryer are controlled by baghouse SV1, with emission exhausted through Stack SV1a. The efficiency of the baghouse is determined to be 99.9%. The PM and PM10 emissions (dryer combustion + dryer) are determined using the following equation and are summarized in the following table:

Emissions Before Controls (ton/yr) \* ( 1 - 0.001 ) = Emissions After Controls

	PM	PM10	SO2	NOx	VOC	CO
Natural Gas, ton/yr	31.54	4.44	0.20	32.85	1.81	<b>27.59</b>
No. 1 / No. 2 Fuel Oil, ton/yr	31.54	4.44	168.98	47.60	0.81	11.90
No. 4 Fuel Oil, ton/yr	31.55	4.45	168.75	45.00	0.56	11.25
Re-refined Oil, ton/yr	<b>31.61</b>	<b>4.50</b>	<b>346.50</b>	36.96	<b>2.31</b>	4.85
Propane	31.54	4.44	0.03	66.31	1.75	11.17
Butane	31.54	4.44	0.06	<b>67.21</b>	1.29	11.59

### B. CONVEYING:

The emissions from conveying are uncontrolled. Thus, the emissions after controls equal the emissions before controls.



$$\begin{aligned} \text{PM: } & 0.183 \text{ lb/ton} * 216 \text{ ton/hr} * 8760 \text{ hr/yr} * 1/2000 \text{ ton/lb} = \mathbf{17.27 \text{ ton/yr}} \\ \text{PM10: } & 10\% \text{ PM} = \mathbf{1.73 \text{ ton/yr}} \end{aligned}$$

#### C. UNPAVED ROADS:

The unpaved road emissions are controlled utilizing measures that reduce the PM and PM10 emissions by 50%. The PM and PM10 emissions after controls are determined using the following equation and are summarized in the following table:

$$\text{Emissions Before Controls (ton/yr)} * (1 - 0.50) = \text{Emissions After Controls}$$

	PM	PM10	SO2	NOx	VOC	CO
Tri-axle	19.69	6.89	-	-	-	-
Front End Loader	4.69	1.64	-	-	-	-

#### D. STORAGE:

The storage emissions are controlled utilizing measures that reduce the PM and PM10 emissions by 50%. The PM and PM10 emissions after controls are determined using the following equation and are summarized in the following table:

$$\text{Emissions Before Controls (ton/yr)} * (1 - 0.50) = \text{Emissions After Controls}$$

	PM	PM10	SO2	NOx	VOC	CO
Storage	0.28	0.10	-	-	-	-

#### SUMMARY OF POTENTIAL EMISSIONS AFTER CONTROLS AT PLANT 03310:

	PM	PM10	SO2	NOx	VOC	CO
Dryer/ Dryer Comb.	31.61	4.50	346.50	67.21	2.31	27.59
Conveying	17.27	1.73	-	-	-	-
Tri-axle	19.69	6.89	-	-	-	-
Front End Loader	4.69	1.64	-	-	-	-
Storage	0.28	0.10	-	-	-	-
<b>Total</b>	<b>73.54</b>	<b>14.86</b>	<b>346.50</b>	<b>67.21</b>	<b>2.31</b>	<b>27.59</b>

#### 4. EMISSIONS AFTER FUEL USE LIMIT AT PLANT 03310:

Based on the above emissions calculations, the SO2 emissions (346.50 tons/yr) exceed the allowable source FESOP rate of 100 tons per year. Therefore, a fuel use limit for the worst case emitting fuel (re-refined oil) shall be established with equivalent fuel use values estimated for the other fuels combusted in the dryer. The following calculations determine these values and their respective emissions generated.

## A. DRYER COMBUSTION EMISSIONS:

### Re-refined Oil:

The worst case SO<sub>2</sub> emitting fuel combusted in the dryer is re-refined oil. The following calculations determine the fuel use limit based on the allowable rate of 59.4 tons per year, and the AP-42 emission factor of 107 lb SO<sub>2</sub>/Tgal:

$$59.4 \text{ ton SO}_2/\text{yr} * 2000 \text{ lb SO}_2/\text{ton SO}_2 * 1/150 \text{ Tgal/lb SO}_2 * 1000 \text{ gal/Tgal} = 792,000 \text{ gal/yr}$$

The following calculations determine the emissions associated with the fuel use limit:

$$792,000 \text{ gal/yr} * 1/1000 \text{ Tgal/gal} * \text{Ef lb Poll/Tgal} * 1/2000 \text{ ton Poll/lb Poll} = \text{ton Poll/yr}$$

	PM 33.0 lb/Tgal	PM10 28.5 lb/Tgal	SO <sub>2</sub> 150 lb/Tgal	NO <sub>x</sub> 16.0 lb/Tgal	VOC 1.0 lb/Tgal	CO 2.10 lb/Tgal
BC ton/yr	13.07	11.29	59.40	6.34	0.40	0.83
AC ton/yr	neg.	neg.	59.40	6.34	0.40	0.83

### Natural Gas:

The following calculations determine the equivalent fuel limit for natural gas.

$$792,000 \text{ gal/yr} * 142,000 \text{ Btu/gal} * 1/1000 \text{ cf/Btu} = 112,464,000.00 \text{ cf/yr}$$

The following calculations determine the emissions associated with the equivalent fuel use limit:

$$112,464,000.00 \text{ cf/yr} * 1/1\text{E}6 \text{ MMcf/cf} * \text{Ef lb Poll/MMcf} * 1/2000 \text{ ton Poll/lb Poll} = \text{ton Poll/yr}$$

	PM 1.9 lb/MMcf	PM10 7.6 lb/MMcf	SO <sub>2</sub> 0.6 lb/MMcf	NO <sub>x</sub> 100 lb/MMcf	VOC 5.5 lb/MMcf	CO 84 lb/MMcf
BC ton/yr	0.11	0.43	0.03	5.60	0.31	4.70
AC ton/yr	neg.	neg.	0.03	5.60	0.31	4.70

The following calculations determine the equation that will be used to estimate the amount of natural gas equivalent to the limited amount of re-refined oil.

$$112,464,000.00 * X = 792,000: X = 0.00704225$$

$$0.00704225 * \text{Natural Gas (cf/month)} = \text{equivalent re-refined oil (gal/month)}$$

### No.1 and No. 2 Fuel Oil:

The following calculations determine the equivalent fuel limit for No. 1 and No. 2 fuel oil.

$$792,000 \text{ gal/yr} * 142,000 \text{ Btu/gal} * 1/138,000 \text{ gal/Btu} = 814,956.52 \text{ gal/yr}$$

The following calculations determine the emissions associated with the equivalent fuel use limit:

$$814,956.52 \text{ gal/yr} * 1/1000 \text{ Tgal/gal} * \text{Ef lb Poll/Tgal} * 1/2000 \text{ ton Poll/lb Poll} = \text{ton Poll/yr}$$

	PM 2.0 lb/Tgal	PM10 3.3 lb/Tgal	SO2 71 lb/Tgal	NOx 20 lb/Tgal	VOC 0.34 lb/Tgal	CO 5.00 lb/Tgal
BC ton/yr	0.81	1.34	28.90	8.14	0.14	2.04
AC ton/yr	neg.	neg.	28.90	8.14	0.14	2.04

The following calculations determine the equation that will be used to estimate the amount of No. 1 and No. 2 fuel oil equivalent to the limited amount of re-refined oil.

$$814,956.52 * X = 792,000: X = 0.9718309$$

$$0.9718309 * \text{No.1 or No.2 oil (gal/month)} = \text{equivalent re-refined oil (gal/month)}$$

#### No. 4 Fuel Oil:

The following calculations determine the equivalent fuel limit for No. 4 fuel oil.

$$792,000 \text{ gal/yr} * 142,000 \text{ Btu/gal} * 1/146,000 \text{ gal/Btu} = 770,301.37 \text{ gal/yr}$$

The following calculations determine the emissions associated with the equivalent fuel use limit:

$$770,301.37 \text{ gal/yr} * 1/1000 \text{ Tgal/gal} * \text{Ef lb Poll/Tgal} * 1/2000 \text{ ton Poll/lb Poll} = \text{ton Poll/yr}$$

	PM 7.0 lb/Tgal	PM10 7.0 lb/Tgal	SO2 75 lb/Tgal	NOx 20 lb/Tgal	VOC 0.25 lb/Tgal	CO 5 lb/Tgal
BC ton/yr	2.70	2.70	28.88	7.70	0.10	1.93
AC ton/yr	neg.	neg.	28.88	7.70	0.10	1.93

The following calculations determine the equation that will be used to estimate the amount of No. 4 fuel oil equivalent to the limited amount of re-refined oil.

$$770,301.37 * X = 792,000: X = 1.028169$$

$$1.028169 * \text{No.4 oil (gal/month)} = \text{equivalent re-refined oil (gal/month)}$$

#### Propane:

The following calculations determine the equivalent fuel limit for propane.

$$792,000 \text{ gal/yr} * 142,000 \text{ Btu/gal} * 1/94,000 \text{ gal/Btu} = 1,196,425.53 \text{ gal/yr}$$

The following calculations determine the emissions associated with the equivalent fuel use limit:

$$1,196,425.53 \text{ gal/yr} * 1/1000 \text{ Tgal/gal} * \text{Ef lb Poll/Tgal} * 1/2000 \text{ ton Poll/lb Poll} = \text{ton Poll/yr}$$

	PM 0.6 lb/Tgal	PM10 0.6 lb/Tgal	SO2 0.01lb/Tgal	NOx 19.0 lb/Tgal	VOC 0.5 lb/Tgal	CO 3.20 lb/Tgal
BC ton/yr	0.36	0.36	0.01	11.36	0.30	1.91
AC Ton/yr	neg.	neg.	0.01	11.36	0.30	1.91

The following calculations determine the equation that will be used to estimate the amount of propane equivalent to the limited amount of re-refined oil.

$$1,196,425.53 * X = 792,000: \quad X = 0.661971$$

$$0.661971 * \text{propane (gal/month)} = \text{equivalent re-refined oil (gal/month)}$$

#### **Butane:**

The following calculations determine the equivalent fuel limit for butane.

$$792,000 \text{ gal/yr} * 142,000 \text{ Btu/gal} * 1/102,000 \text{ gal/Btu} = 1,102,588.24 \text{ gal/yr}$$

The following calculations determine the emissions associated with the equivalent fuel use limit:

$$1,102,588.24 \text{ gal/yr} * 1/1000 \text{ Tgal/gal} * \text{Ef lb Poll/Tgal} * 1/2000 \text{ ton Poll/lb Poll} = \text{ton Poll/yr}$$

	PM 0.6 lb/Tgal	PM10 0.6 lb/Tgal	SO2 0.02 lb/Tgal	NOx 21.0 lb/Tgal	VOC 0.4 lb/Tgal	CO 3.60 lb/Tgal
BC ton/yr	0.33	0.33	0.01	11.57	0.22	1.98
AC ton/yr	neg.	neg.	0.01	11.57	0.22	1.98

The following calculations determine the equation that will be used to estimate the amount of butane equivalent to the limited amount of re-refined oil.

$$1,102,588.24 * X = 792,000: \quad X = 0.7183098$$

$$0.7183098 * \text{butane (gal/month)} = \text{equivalent re-refined oil (gal/month)}$$

#### **B. TOTAL DRYER EMISSIONS AFTER FUEL USE LIMIT:**

The following table summarizes the total dryer emissions based on emissions after controls, application of 326 IAC 7, and application of the re-refined oil fuel use limit:

	PM	PM10	SO2	NOx	VOC	CO
Natural Gas, ton/yr	31.54	4.43	0.03	5.60	0.31	<b>4.70</b>
No. 1 / No. 2 Fuel Oil, ton/yr	31.54	4.43	28.90	8.14	0.14	2.04
No. 4 Fuel Oil, ton/yr	31.54	4.43	28.88	7.70	0.10	1.93
Re-refined Oil, ton/yr	<b>31.56</b>	<b>4.44</b>	<b>59.40</b>	6.34	<b>0.40</b>	0.83
Propane	31.54	4.43	0.01	11.36	0.30	1.91
Butane	31.54	4.43	0.01	<b>11.57</b>	0.22	1.98

**C. EMISSIONS AT PLANT 03310 AFTER CONTROLS AND AFTER THE FUEL USE LIMIT:**

The following table summarizes the total source emissions based on emissions after controls, application of 326 IAC 7, and application of the re-refined oil fuel use limit:

	PM	PM10	SO2	NOx	VOC	CO
Dryer/ Dryer Comb.	31.56	4.44	59.40	11.57	0.40	4.70
Conveying	17.27	1.73	-	-	-	-
Tri-axle	19.69	6.89	-	-	-	-
Front End Loader	4.69	1.64	-	-	-	-
Storage	0.28	0.10	-	-	-	-
Total	<b>73.49</b>	<b>14.80</b>	<b>59.40</b>	<b>11.57</b>	<b>0.40</b>	<b>4.70</b>

**5. HAP PTE:**

The following calculations determine the HAP PTE for the source based on a maximum capacity of 225 tons per hour, a maximum dryer combustion capacity of 75 MMBtu/hr, emissions before controls, 8,760 hours of operation, and a combined emission factor of 0.0058 lb/ton as obtained from EPA SCC 3-05-002-05:

$$225 \text{ tons/hr} * 8760 \text{ hr/yr} * \text{Ef } 0.0058 \text{ lb Poll/ton} * 1/2000 \text{ ton Poll/lb Poll} = 5.72 \text{ tons HAP/yr}$$

The combined HAP PTE is less than the allowable rate of 25 tons/yr. The "combined" HAP PTE is also less than the "individual" HAP rate of 10 tons/yr.

**Potential To Emit of Revision**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA."

This table reflects the PTE before controls for the source after this revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. The emissions in these tables are the net increase in the PTE before controls and limitations resulting from changing the types of fuels used.

The following table summarizes the PTE due to the modification based on the emissions calculations found in Section 2 of the emission calculations.

Pollutant	Potential To Emit (tons/year)
PM	52.84
PM <sub>10</sub>	42.44
SO <sub>2</sub>	346.30
VOC	0.32
CO	14.96
NO <sub>x</sub>	0.00

  

HAPs	Potential To Emit (tons/year)
TOTAL	0.16

### Justification for Revision

The FESOP is being revised through a FESOP Significant Permit Revision. This revision is being performed pursuant to 326 IAC 2-8-11.1(f)(1)(E), "A significant permit revision is a modification that is not an administrative amendment under section 10 of this rule or subject to subsection (d) (Minor Permit Revision) and includes any modification with a potential to emit (PTE) greater than or equal to twenty-five (25) tons per year of PM, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, H<sub>2</sub>S, TRS, reduced sulfur compounds, or fluorides. The PTE of PM, PM<sub>10</sub>, and SO<sub>2</sub> exceed 25 tons per year. Thus, a significant revision is required.

### County Attainment Status

The source is located in Tippecanoe County.

Pollutant	Status
PM <sub>10</sub>	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Tippecanoe County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Tippecanoe County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions

Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

**Source Status**

Existing Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	249.00
PM <sub>10</sub>	99.00
SO <sub>2</sub>	99.00
VOC	2.95
CO	24.66
NO <sub>x</sub>	81.75

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon the limited emissions table in the Technical Support Document (TSD) to F157-12074-03286.

**Potential to Emit of Source After Issuance**

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this FESOP revision.

Process/facility	Potential to Emit (tons/year)						
	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Plant 157-03286 (Adjacent)	64.67	13.02	39.60	0.26	3.11	7.73	3.96
Plant 157-03310 (Adjacent)	73.49	14.80	59.40	0.40	4.70	11.57	5.88
Total	<b>138.16</b>	<b>27.82</b>	<b>99.00</b>	<b>0.66</b>	<b>7.81</b>	<b>19.30</b>	<b>9.84</b>

Part 70 Major Source Threshold	-	100	100	100	100	100	10 ind. 25 tot.
PSD Threshold Level	250	250	250	250	250	250	-

- (a) This revision to an existing minor stationary source is not major because the emissions after the modification are less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.
- (b) Since the potential to emit from the entire source is less than 250 tons per year of each criteria pollutant, the source is a minor source pursuant to 326 IAC 2-2, PSD.
- (c) This revision to the existing FESOP will not change the status of the stationary source because the emissions from the entire source will still be limited to less than the Part 70 major source thresholds.

### **Federal Rule Applicability**

#### **New Source Performance Standards:**

##### **40 CFR 60.90 - 60.93, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities:**

This hot mix asphalt plant was previously not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.90, Subpart I). However, pursuant to 40 CFR 60.90(b), any applicable facility under this subpart which commences construction or modification after June 11, 1973 is subject to the requirements of this subpart. The proposed changes to the modification are considered a modification pursuant to 40 CFR 60.14. Thus, the aggregate dryer is subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.90, Subpart I). Pursuant to the NSPS:

- (a) Performance tests shall be required as specified in this Subpart and as outlined in Part 60.8.
- (b) On or after the date on which the performance tests are completed, no owner or operator subject to the provisions of Subpart I shall discharge into the atmosphere from any affected facility any gases which:
  - (1) contain particulate matter in excess of 0.04 grains per dry standard cubic foot.
  - (2) exhibit 20 percent opacity, or greater.

According to the stack tests conducted on May 26, 1998, the total particulate concentration is less than 0.02 grains per dry standard cubic foot with the opacity measured at zero (0).

The PM shall not exceed 0.04 grains per dry standard cubic foot, which is equivalent to 11.2 pounds per hour and 49.2 tons per year. After application of emission controls and the fuel use limit of 792,000 gal/yr, the PM emissions are reduced to 31.56 tons per year (7.21 pounds per hour), which is below the applicable level of 11.2 lb/hr. Therefore, compliance with the limitations of this New Source Performance Standard (NSPS) are determined to be achieved.

##### **40 CFR 60.110 - 60.113, Subpart K, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978:**

40 CFR 60.110 - 60.113, Subpart K, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978 does not apply to tank 16A because the capacity (12,500 gallons) is less than the applicable capacity of 40,000 gallons.



**40 CFR 60.110a - 60.115a, Subpart Ka, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and prior to July 23, 1984:**

40 CFR 60.110a - 60.115a, Subpart Ka, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and prior to July 23, 1984 does not apply to tank 16B because the capacity (8,000 gallons) is less than the applicable capacity of 40,000 gallons. This subpart does not apply to tank 16A because the tank was constructed prior to the applicable date of May 18, 1978.

**40 CFR 60.110b - 60.117b, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984:**

40 CFR 60.110b - 60.117b, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 does not apply to tanks 16A and 16B because both tanks were constructed in 1978 and 1979, respectively, prior to the applicable date of July 23, 1984.

**National Emission Standards for Hazardous Air Pollutants (NESHAP):**

There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 326 IAC 20, and 40 CFR Part 61 and 40 CFR Part 63) applicable to this proposed revision.

**State Rule Applicability - Entire Source**

**326 IAC 2-6 (Emission Reporting)**

This source is located in Tippecanoe County and the potential to emit of all applicable pollutants is less than 100 tons per year. Therefore, 326 IAC 2-6 does not apply.

**326 IAC 5-1 (Visible Opacity Limitations)**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

## State Rule Applicability - Individual Facilities

### 326 IAC 2-8 (Federally Enforceable State Operating Permit)

- (a) Pursuant to Condition D.1.2, FESOP F157-5448-03286, issued on December 11, 1996, the PM<sub>10</sub> from the aggregate dryers shall not exceed 9.17 pounds per hour. The PM<sub>10</sub> emissions from the aggregate dryers after the use of emissions controls and the fuel use limit are estimated to be 14.80 tons/yr (3.38 lb/hr) for the dryer of plant 03310 and 13.02 tons/yr (2.97 lb/hr) for plant 03310. Since the source PM<sub>10</sub> emissions from the dryers after the proposed modification (6.35 lb/hr) are less than the applicable level of 9.17 lb/hr, the aggregate dryers will continue to comply with this limitation.
- (b) The potential to emit of SO<sub>2</sub> from combustion of re-refined oil, No. 2 distillate oil and No. 4 distillate oil are greater than 100 tons per year. In order to qualify for a FESOP, the source has accepted a re-refined oil limit of 792,000 gallons per consecutive twelve (12) month period and a sulfur content limit of 1.0% in the re-refined oil for plant 03310. In addition, Rieth Riley has accepted a reduction in the fuel use limit of plant 03286 to 528,000 gal/yr. To establish the alternative fuel usage that is equivalent to re-refined oil combustion, the following conversions shall be used:

(1) Natural Gas:	0.00704225	*	Natural Gas	=	Re-refined Oil
(2) No. 2 Fuel Oil:	0.9718309	*	No. 2 Fuel Oil	=	Re-refined Oil
(3) No. 4 Fuel Oil:	1.028169	*	No. 4 Fuel Oil	=	Re-refined Oil
(4) Propane:	0.661971	*	Propane	=	Re-refined Oil
(5) Butane:	0.7183098	*	Butane	=	Re-refined Oil

This will limit the potential to emit SO<sub>2</sub> from the one (1) aggregate dryer to 99.00 tons per year. This limitation will result in total source-wide SO<sub>2</sub> emissions of less than 100 tons per year.

### 326 IAC 6-3-2 (Process Operations) and 326 IAC 2-2 (Prevention of Significant Deterioration)

- (a) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the aggregate dryer shall not exceed 59.79 pounds per hour when operating at a process weight rate of 225 tons per hour. This limitation is based on the following:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

Condition D.1.1 of FESOP F157-5448-03286, issued on December 11, 1996, the particulate matter (PM) from the aggregate dryer of plant 03310 was limited to 20.58 pounds per hour. Changing the primary fuel combusted at the dryer to re-refined oil increases the particulate matter (PM) PTE by 52.84 tons per year for a source total of 31,536 tons per year, but with use of a baghouse with a 99.9% efficiency and a re-refined oil fuel use limit of 792,000 gal/yr, the PM emissions are reduced to 31.56 tons per year (7.20 pounds per hour), well below the 59.79 pounds per hour limit allowed under 326 IAC 6-3. Thus, compliance is determined to be achieved.

In addition, Pursuant to 40 CFR Part 60.90, Subpart I, the PM shall not exceed 0.04 grains per dry standard cubic foot, which is equivalent to 11.2 pounds per hour and 49.2 tons per year. Therefore, compliance with this New Source Performance Standard (NSPS) will result in compliance with 326 IAC 6-3-2 and limit PM from the entire source to less than 250 tons per year.

### **326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)**

This source is subject to the requirements of 326 IAC 7-1.1 because the potential to emit (PTE) of SO<sub>2</sub> for the worst case fuel (346.30 tons per year) are greater than the applicable level of 25 tons per year.

Pursuant to 326 IAC 7-1.1-2, the SO<sub>2</sub> emissions from the dryer when combusting No. 2 and No. 4 distillate oil shall be limited to five-tenths (0.5) pound per million British thermal units. In order to comply with this limit, the sulfur content of the No. 2 and No. 4 distillate oil shall not exceed 0.5 percent (0.5%).

#### For No. 1 and No. 2 Distillate Oil:

$0.5 \text{ lb SO}_2/\text{MMBtu} * 1 \text{ MMBtu}/1 \text{ E6 Btu} * 138000 \text{ Btu/gal} * 1000 \text{ gal/Tgal} * 1/142 \text{ Tgal/lb} = 0.5 \% \text{ sulfur content}$

#### For No. 4 Distillate Oil:

$0.5 \text{ lb SO}_2/\text{MMBtu} * 1 \text{ MMBtu}/1 \text{ E6 Btu} * 146000 \text{ Btu/gal} * 1000 \text{ gal/Tgal} * 1/142 \text{ Tgal/lb} = 0.5 \% \text{ sulfur content}$

Pursuant to 326 IAC 7-1.1-2, the SO<sub>2</sub> emissions from the dryer when combusting re-refined oil shall be limited to one and six-tenths (1.6) pounds per million British thermal units for re-refined oil combustion. In order to comply with this limit, the sulfur content of the re-refined oil shall not exceed 2.1 percent (2.1%).

#### For Re-refined Oil:

$1.6 \text{ lb SO}_2/\text{MMBtu} * 1 \text{ MMBtu}/1 \text{ E6 Btu} * 142000 \text{ Btu/gal} * 1000 \text{ gal/Tgal} * 1/107 \text{ Tgal/lb} = 2.1 \% \text{ sulfur content}$

Although the sulfur content required to meet the requirements of 326 IAC 7 are 2.1%, Rieth Riley has requested a limit of 1% sulfur content for the re-refined oil. Thus, the sulfur content used to determine the re-refined oil combustion PTE is based on a sulfur content of 1%.

### **Compliance Requirements**

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period. The compliance monitoring requirements applicable to this source are as follows:

The aggregate dryer has applicable compliance monitoring conditions already in the FESOP as specified below:

- (a) Daily visible emissions notations of the mixing and drying stack exhaust shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.
- (b) The Permittee shall record the total static pressure drop across the baghouse controlling the aggregate dryer, at least once per shift while under normal operation. The pressure drop across the baghouse shall be maintained within the range of 2.0 to 5.0 inches of water. If the pressure drop falls outside of this range, corrective action must be taken immediately in accordance with the Preventive Maintenance Plan.
- (c) The inlet temperature of the baghouse shall be maintained within a range of 200 to 350 degrees F to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. In the event that the temperature is outside this range, corrective action shall be taken within 8 hours.
- (d) In the event that bag failure has occurred due to rupture, melting, etc., corrective action shall be taken. Dependent upon the severity of the excursion, corrective action shall not exceed 8 hours from the time of discovery. The baghouse shall shut down for visual inspection within 24 hours and bags shall be replaced as needed.

These monitoring conditions are necessary because the baghouse for the mixing/drying process must operate properly to ensure compliance with 40 CFR Part 60.90, Subpart I, 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP).

### Proposed Changes

The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language appears in **bold**):

#### A.2 Emission Units and Pollution Control Summary

The stationary source consists of the following emission units and pollution control devices:

Plant ID No. 157-03310

- (a) One (1) aggregate dryer with a maximum capacity of 225 tons per hour, having a burner with a maximum heat input rate of 75 million British thermal units per hour, exhausting through a baghouse at stack SV1a. The burner is fired by ~~natural gas, including as a backup fuel.~~ **re-refined oil, with backup fuels of No. 2 and No. 4 distillate oils, propane, butane, and natural gas.** ~~and does not use a backup fuel.~~

- (b) One (1) baghouse with a total filter area of 11,677 square feet.

Plant ID No. 157-03286

- (a) One (1) aggregate dryer with a maximum capacity of 200 tons per hour, having a burner with a maximum heat input rate of 82.4 million British thermal units per hour, exhausting through a baghouse at stack SV1. The burner is fired by ~~waste~~ **re-refined** oil, with backup fuels of No. 2 and No. 4 distillate oils, propane, butane, and natural gas.
- (b) One (1) baghouse with a total filter area of 6,720 square feet.

Condition A.3:

Condition A.3 shall be amended to include the two existing re-refined oil storage tanks.

A.3 Insignificant Activities

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20):

Plant ID No. 157-03310

- (1) One (1) natural gas-fired combustion unit with a heat input equal to or less than 10 million British thermal units per hour (0.5 million British thermal units per hour).
- (2) One (1) natural gas-fired combustion unit with a heat input equal to or less than 10 million British thermal units per hour (1.2 million British thermal units per hour).
- (3) One (1) material conveying and handling operation.
- (4) Paved and unpaved roads and parking lots with public access.
- (5) Plant maintenance activities including grinding, sanding, and welding.
- (6) One (1) 30,000 gallon storage tank ID No. 20 for liquid asphalt AC-20.
- (7) One (1) 20,000 gallon storage tank ID No. 21 for liquid asphalt.
- (8) One (1) material storage and handling operation.
- (9) two (2) re-refined oil above ground storage tanks, identified as Tanks 16A and 16B, with design capacities of 12,500 and 8,000 gallons respectively.**

Plant ID No. 157-03286

- (1) One (1) liquid propane-fired combustion unit with heat input less than 6 million British thermal units per hour (0.8 million British thermal units per hour).
- (2) One (1) 35,000 gallon storage tank ID No. 15 for liquid asphalt AC-20.
- (3) One (1) 18,000 gallon storage tank ID No. 16 for liquid propane.
- (4) One (1) testing laboratory as defined in 326 IAC 2-7-1(20).

- (5) One (1) material storage and handling operation.
- (6) Paved and unpaved roads and parking lots with public access.
- (7) One (1) material conveying and handling operation.
- (8) Plant maintenance activities including grinding sanding, and welding.
- (9) One (1) above ground storage tank, identified as Tank K, constructed in 1970, storing ~~waste~~ **re-refined** oil, capacity: 20,000 gallons.

Continued on next page...

## SECTION D.1 FACILITY OPERATION CONDITIONS

### Plant ID No. 157-03310

(1) One (1) aggregate dryer with a maximum capacity of 225 tons per hour, having a burner with a maximum heat input rate of 75 million British thermal units per hour, exhausting through a baghouse at stack SV1a. The burner is fired by **re-refined oil, with backup fuels of No. 2 and No. 4 distillate oils, propane, butane and natural gas.** and ~~does not use a backup fuel.~~

(2) One (1) baghouse with a total filter area of 11,677 ft<sup>2</sup>.

**(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)**

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Particulate Matter (PM) [40 CFR 60.90, 60.91, 60.92 & 60.93] [326 IAC 6-3-2] [326 IAC 2-2]  
Pursuant to the New Source Performance Standards, 326 IAC 12 (40 CFR 60.90 to 60.93, Subpart I), the particulate matter emissions from the aggregate dryer/mixer shall not exceed 0.04 grain per dry standard cubic foot, equivalent to 11.2 pounds per hour and 49.2 tons per year, and visible emissions from the plant shall not exceed twenty percent (20%) opacity. Compliance with these limits will also satisfy 326 IAC 6-3-2 and make 326 IAC 2-2 not applicable.

~~That pursuant to 326 IAC 6-3-2, particulate matter emissions from the aggregate dryer shall not exceed 20.58 pounds per hour (lb/hr) and that visible emissions from the aggregate dryer shall not exceed 40% opacity. Compliance with these limits will satisfy 326 IAC 5-1 and 326 IAC 6-3-2.~~

D.1.2 Particulate Matter Ten Microns (PM-10)  
That pursuant to 326 IAC 2-8-4, emissions of particulate matter ten microns from the aggregate dryer/mixer shall not exceed 9.17 pounds per hour (lb/hr), including both filterable and condensable fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.1.3 Volatile Organic Compounds (VOC)

That pursuant to 326 IAC 2-8-4, the VOC usage in the production of cold mix cutback asphalt shall be limited to 95.16 tons per year (ton/yr). This is equivalent to 11,514 tons of liquid binder used per year in the production of cold mix cutback asphalt based on 5.1 percent diluent present in the asphalt. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.1.4 Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 2-8-4]  
Pursuant to 326 IAC 2-8-4(1), the total re-refined oil usage will be limited to no more than 792,000 gallons per consecutive twelve (12) month period. For the purposes of this limit, the following conversions shall be used to determine the equivalent fuel use for the following alternative fuels:

(a) Natural Gas:	0.00704225	* cubic feet of Natural Gas	= gallons of Re-refined Oil
(b) No. 2 Fuel Oil:	0.9718309	* gallons of No. 2 Fuel Oil	= gallons of Re-refined Oil
(c) No. 4 Fuel Oil:	1.028169	* gallons of No. 4 Fuel Oil	= gallons of Re-refined Oil
(d) Propane:	0.661971	* gallons of Propane	= gallons of Re-refined Oil
(e) Butane:	0.7183098	* gallons of Butane	= gallons of Re-refined Oil

Therefore, the Part 70 Permit Program rules, 326 IAC 2-7, do not apply.

**D.1.5 Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-1.1-2]**

- (a) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the aggregate dryer shall not exceed five tenths (0.5) pound per million British thermal units heat input, when operating on No. 2 or No. 4 distillate oil. In order to comply with this limit the sulfur content of the No. 2 distillate oil or No. 4 distillate oil shall not exceed 0.5 percent (0.5%).
- (b) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the aggregate dryer shall not exceed one and six-tenths (1.6) pounds per million British thermal units, when operating on re-refined oil. In order to comply with this limit and the fuel use limit of Condition D.1.4, the sulfur content of the re-refined oil shall not exceed 1.0 percent (1.0%).

**Testing requirements [326 IAC 2-8-4(3)]**

**D.1.46 Performance Testing [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]**

~~Between 540 days to 720 days of the issuance of this permit, the Permittee shall perform PM and PM<sub>10</sub> testing utilizing methods per 40 CFR 60 Appendix A, Method 5, 17, 40 CFR Part 51 Appendix M, Method 201, 201a, 202, as approved by the Commissioner to demonstrate compliance with Condition D.1.1 and D.1.2. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>.~~

Within 60 days after achieving the maximum production rate at which the aggregate dryer will be operated, but not later than 180 days after initial startup, the Permittee shall perform PM and PM<sub>10</sub> testing utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM<sub>10</sub>, or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing.

**Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]**

**D.1.57 Monitoring of Baghouse Operational Parameters**

That the baghouse shall be operated at all times when the aggregate dryer is in operation. The Permittee shall monitor the following parameters:

- (a) The total static pressure drop across the baghouse shall be measured and recorded once per shift while under normal operation. The pressure drop for the unit shall be maintained within the range of 2.0 inches to 5.0 inches of water. If the pressure drop falls outside of this range, corrective action must be taken immediately in accordance with the Preventive Maintenance Plan as submitted to IDEM on March 14, 1996.



- (b) The inlet temperature to the baghouse shall be maintained within a range of 200 to 350 degrees F to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. In the event that the temperature is outside of this range, corrective action shall be taken within 8 hours.

In the event that bag failure has occurred due to rupture, melting., etc., corrective action shall be taken. Dependent upon the severity of the excursion, corrective action shall not exceed 8 hours from the time of discovery. The baghouse shall shutdown for visual inspection within 24 hours and bags shall be replaced as needed.

**D.1.68 Daily Visible Emission Notations**

Daily visible emission notations of the conveyors, material transfers, aggregate storage piles, unpaved roads, and the mixing and drying operation stack exhaust shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for each unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

**D.1.79 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

A Preventive Maintenance Plan, in accordance with ~~Condition B-13~~, **Section B - Preventive Maintenance Plan**, of this permit, is required for this facility **and its control device**.

Record Keeping Requirements [326 IAC 2-8-4(9)]

**D.1.810 Production Rate**

The Permittee shall maintain monthly records at the source of the following values:

- (a) Tons of liquid binder used; and
- (b) Average diluent content.

**D.1.11 Sulfur Dioxide Emissions and Sulfur Content**

**Compliance shall be determined utilizing one of the following options.**

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal units heat input, when operating on No. 2 or No. 4 distillate oil, and one and six-tenths (1.6) pounds per million British thermal units when operating on re-refined oil by:

- (1) Providing vendor analysis of fuel delivered, if accompanied by a certification;
- (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

- (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

**(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or**

**(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the aggregate dryer, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.**

**A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.**

**D.1.12 Operational Parameters and Quarterly Reporting**

**The Permittee shall maintain monthly records at the stationary source of fuel usage. Quarterly summaries to document compliance with operation condition D.1.4 shall be submitted, using the enclosed form or its equivalent, within thirty (30) days after the end of the quarter being reported. This report shall include the number of gallons of each fuel used.**

**D.1.13 Record Keeping Requirements**

**(a) To document compliance with the percent sulfur content limitations in Condition D.1.4 and to document compliance with Condition D.1.5, the Permittee shall maintain records in accordance with (1) through (6) below.**

- (1) Calendar dates covered in the compliance determination period;**
- (2) Actual fuel usage of each fuel used since last compliance determination period and equivalent sulfur dioxide emissions;**
- (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, the natural gas fired boiler certification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34); and**

**If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:**

- (4) Fuel supplier certifications;**
- (5) The name of the fuel supplier; and**
- (6) A statement from the each fuel supplier that certifies the sulfur content of the fuels used.**

**The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.**

**(b) To document compliance with Condition D.1.8, the Permittee shall maintain records of visible emission notations of the baghouse stack exhaust once per shift.**

**(c) To document compliance with Condition D.1.7, the Permittee shall maintain the following:**

- (1) Weekly records of the following operational parameters during normal operation when venting to the atmosphere:**
    - (A) Inlet and outlet differential static pressure;**
    - (B) Cleaning cycle: frequency and differential pressure; and**
    - (C) inlet temperature.**
  - (2) Documentation of all response steps implemented, per event .**
  - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.**
  - (4) Quality Assurance/Quality Control (QA/QC) procedures.**
  - (5) Operator standard operating procedures (SOP).**
  - (6) Manufacturer's specifications or its equivalent.**
  - (7) Equipment "troubleshooting" contingency plan.**
  - (8) Documentation of the dates vents are redirected.**
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.**

#### **D.1.14 Used Oil Requirements**

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The re-refined oil burned in the aggregate dryer shall comply with the used oil requirements specified in 329 IAC 13 (Used Oil Management). Pursuant to 329 IAC 13-3-2 (Used Oil Specifications), used oil burned for energy recovery that is classified as off-specification used oil fuel shall comply with the provisions of 329 IAC 13-8 (Used Oil Burners Who Burn Off-specification Used Oil For Energy Recovery), including:

- (a) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),**
- (b) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and**
- (c) Maintaining records pursuant to 329 IAC 13-8-6 (Tracking).**

The burning of mixtures of used oil and hazardous waste that is regulated under 329 IAC 3.1 is prohibited at this source.

#### **D.1.15 NSPS Reporting Requirement**

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Pursuant to the New Source Performance Standards (NSPS), Part 60.90, Subpart I, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- (a) Commencement of construction date (no later than 30 days after such date);**
- (b) Actual start-up date (within 15 days after such date); and**
- (c) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.**

**Reports are to be sent to:**

**Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015**

**The application and enforcement of these standards have been delegated to the IDEM  
OAQ. The requirements of 40 CFR Part 60 are also federally enforceable.**

Continued on the next page...

## SECTION D.2 FACILITY OPERATION CONDITIONS

Plant ID No. 157-03286

- (1) One (1) aggregate dryer with a maximum capacity of 200 tons per hour, having a burner with a maximum heat input rate of 82.4 million British thermal units per hour, exhausting through a baghouse at stack SV1. The burner is fired by ~~waste~~ **re-refined** oil, with backup fuels of No. 2 and No. 4 distillate oils, propane, butane and natural gas.

- (2) One (1) baghouse with a total filter area of 6,720 square feet.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

- D.2.1 Particulate Matter (PM) [40 CFR 60.90, 60.91, 60.92 & 60.93] [326 IAC 6-3-2] [326 IAC 2-2]  
Pursuant to the New Source Performance Standards, 326 IAC 12 (40 CFR 60.90 to 60.93, Subpart I), the particulate matter emissions from the aggregate dryer/mixer shall not exceed 0.04 grain per dry standard cubic foot, equivalent to 11.2 pounds per hour and 49.2 tons per year, and visible emissions from the plant shall not exceed twenty percent (20%) opacity. Compliance with these limits will also satisfy 326 IAC 6-3-2 and make 326 IAC 2-2 not applicable.

- D.2.2 Particulate Matter Less Than 10 Microns (PM-10)  
That pursuant to the 326 IAC 2-8-4, emissions of particulate matter less than 10 microns from the aggregate dryer shall not exceed 9.17 pounds per hour (lb/hr) of filterable PM-10. Compliance with this limit will satisfy 326 IAC 2-8-4. Due to this limit, Part 70 Program rules do not apply.

- ~~D.2.3 Nitrogen Oxides (NO<sub>x</sub>) Emission Limitations [326 IAC 2-8-4]  
Pursuant to 326 IAC 2-8-4(1), the total waste oil usage will be limited to no more than 3,637,750 gallons per consecutive twelve (12) month period. For the purposes of this limit, 1 gallon of butane is equal to using 1.31 gallons of waste oil, 1 gallon of propane is equal to using 1.19 gallons of waste oil, 1 gallon of No. 2 or No. 4 distillate oil is equal to using 1.25 gallons of waste oil, and 1 million cubic feet of natural gas is equal to using 6,289 gallons of waste oil. This limitation will result in NO<sub>x</sub> emissions from the aggregate dryer of no more than 29.07 tons per year and total source NO<sub>x</sub> emissions of less than 100 tons per year. Therefore, the Part 70 Permit Program rules, 326 IAC 2-7, do not apply.~~

- D.2.43 Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 2-8-4]  
Pursuant to 326 IAC 2-8-4(1), the total **waste re-refined** oil usage will be limited to no more than ~~1,850,467~~ **528,000** gallons per consecutive twelve (12) month period and the sulfur content of the re-refined oil shall be limited to no more than 1.0%. ~~For the purposes of this limit, 1 gallon of No. 2 or No. 4 distillate oil at a 0.5% sulfur content are each considered equal to using 0.664 gallon of waste oil. This limitation will result in SO<sub>2</sub> emissions from the aggregate dryer of less than 99.2 tons per year and total source SO<sub>2</sub> emissions of less than 100 tons per year. Therefore, the Part 70 Permit Program rules, 326 IAC 2-7, do not apply.~~ **For the purposes of this limit, the following conversions shall be used to determine the equivalent fuel use for the following alternative fuels:**

(a) Natural Gas:	0.00704225	* cubic feet of Natural Gas	= gallons of Re-refined Oil
(b) No. 2 Fuel Oil:	0.9718309	* gallons of No. 2 Fuel Oil	= gallons of Re-refined Oil
(c) No. 4 Fuel Oil:	1.028169	* gallons of No. 4 Fuel Oil	= gallons of Re-refined Oil
(d) Propane:	0.661971	* gallons of Propane	= gallons of Re-refined Oil
(e) Butane:	0.7183098	* gallons of Butane	= gallons of Re-refined Oil

**Therefore, the Part 70 Permit Program rules, 326 IAC 2-7, do not apply.**

**D.2.54 Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-1.1-2]**

- (a) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the aggregate dryer shall not exceed five tenths (0.5) pound per million British thermal units heat input, when operating on No. 2 or No. 4 distillate oil. In order to comply with this limit the sulfur content of the No. 2 distillate oil or No. 4 distillate oil shall not exceed 0.5 percent (0.5%).
- (b) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the aggregate dryer shall not exceed one and six-tenths (1.6) pounds per million British thermal units, when operating on re-refined oil. In order to comply with this limit the sulfur content of the ~~waste re-refined~~ oil shall not exceed ~~2-11.0~~ percent (~~2-11.0~~%).

**Testing Requirements [326 IAC 2-8-4(3)]**

**D.2.75 Performance Testing [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]**

- (a) Between 540 days to 720 days of the issuance of this permit, the Permittee shall perform PM and PM<sub>10</sub> testing utilizing methods per 40 CFR 60 Appendix A, Method 5, 17, 40 CFR Part 51 Appendix M, Method 201, 201a, 202, as approved by the Commissioner to demonstrate compliance with Condition D.2.1 and D.2.2. PM<sub>10</sub> includes filterable and condensible PM<sub>10</sub>.
- (b) During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM and PM<sub>10</sub> testing utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM<sub>10</sub>, or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensible PM<sub>10</sub>. Testing shall be conducted in accordance with Section C- Performance Testing.

**Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]**

**D.2.86 Monitoring of Baghouse Operational Parameters**

The baghouse shall be operated at all times when the aggregate dryer is in operation. The Permittee shall monitor the following parameters:

- (a) The total static pressure drop across the baghouse shall be measured and recorded once per shift while under normal operation. The pressure drop for this unit shall be maintained within the range of 7.0 inches to 10.0 inches of water. If the pressure drop falls outside of this range, corrective action must be taken immediately in accordance with the preventive maintenance Plan as submitted to IDEM on March 14, 1996.

- (b) The inlet temperature to the baghouse shall be maintained within a range of 200 to 350 degrees F to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. In the event that the temperature is outside the range, corrective action shall be taken within 8 hours.

In the event that bag failure has occurred due to rupture, melting, etc., corrective action shall be taken. Dependent upon the severity of the excursion, corrective action shall not exceed 8 hours from the time of discovery. The baghouse shall shut down for visual inspection within 24 hours and bags shall be replaced as needed.

**D.2.97 Daily Visible Emission Notations**

Daily visible emission notations of the conveyors, material transfers, aggregate storage piles, unpaved roads, and the mixing and drying operation stack exhaust shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during the part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristic of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when abnormal emission is observed.

**D.2.68 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

**~~D.2.409~~ Sulfur Dioxide Emissions and Sulfur Content**

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Compliance shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal units heat input, when operating on no. 2 or no. 4 distillate oil, and one and six-tenths (1.6) pounds per million British thermal units when operating on ~~waste~~ **re-refined** oil by:
- (1) Providing vendor analysis of fuel delivered, if accompanied by a certification;
  - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
    - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
    - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the aggregate dryer, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

**D.2.140 Operational Parameters and Quarterly Reporting**

The Permittee shall maintain monthly records at the stationary source of fuel usage. Quarterly summaries to document compliance with operation conditions D.2.3 and ~~D.2.4~~ shall be submitted, using the enclosed forms or their equivalents, within thirty (30) days after the end of the quarter being reported. These reports shall include the number of gallons of each fuel used.

**D.2.121 Record Keeping Requirements**

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(a) To document compliance with the percent sulfur content limitations in Condition D.2.43 and to document compliance with Condition D.2.54, the Permittee shall maintain records in accordance with (1) through (6) below.

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual fuel usage of each fuel used since last compliance determination period and equivalent sulfur dioxide emissions;
- (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, the natural gas fired boiler certification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

- (4) Fuel supplier certifications;
- (5) The name of the fuel supplier; and
- (6) A statement from the each fuel supplier that certifies the sulfur content of the fuels used.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

(b) To document compliance with Condition D.2.97, the Permittee shall maintain records of visible emission notations of the baghouse stack exhaust once per shift.

(c) To document compliance with Condition D.2.86, the Permittee shall maintain the following:

- (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
  - (A) Inlet and outlet differential static pressure;
  - (B) Cleaning cycle: frequency and differential pressure; and
  - (C) inlet temperature.



- (2) Documentation of all response steps implemented, per event .
  - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
  - (4) Quality Assurance/Quality Control (QA/QC) procedures.
  - (5) Operator standard operating procedures (SOP).
  - (6) Manufacturer's specifications or its equivalent.
  - (7) Equipment "troubleshooting" contingency plan.
  - (8) Documentation of the dates vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### **D.2.132**    **Used Oil Requirements**

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The ~~waste~~ **re-refined** oil burned in the aggregate dryer shall comply with the used oil requirements specified in 329 IAC 13 (Used Oil Management). Pursuant to 329 IAC 13-3-2 (Used Oil Specifications), used oil burned for energy recovery that is classified as off-specification used oil fuel shall comply with the provisions of 329 IAC 13-8 (Used Oil Burners Who Burn Off-specification Used Oil For Energy Recovery), including:

- (a) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),
- (b) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and
- (c) Maintaining records pursuant to 329 IAC 13-8-6 (Tracking).

The burning of mixtures of used oil and hazardous waste that is regulated under 329 IAC 3.1 is prohibited at this source.

#### **D.2.143**    **NSPS Reporting Requirement**

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Pursuant to the New Source Performance Standards (NSPS), Part 60.90, Subpart I, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- (a) Commencement of construction date (no later than 30 days after such date);
- (b) Actual start-up date (within 15 days after such date); and
- (c) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015

The application and enforcement of these standards have been delegated to the IDEM OAM.  
The requirements of 40 CFR Part 60 are also federally enforceable.

Continued on the next page....

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
COMPLIANCE DATA SECTION  
FESOP Quarterly Report**

Source Name: Keiser & Keiser Contractors, Inc.  
Source Address: 3425 O'Farrel Road, Lafayette, IN 47904  
Mailing Address: 3425 O'Farrel Road, Lafayette, IN 47904  
FESOP No.: F 157-5448-03286  
Facility: One (1) aggregate dryer at Plant 03286 - Section D.2  
Parameter: ~~Waste Re-refined oil usage (NO<sub>x</sub>, SO<sub>2</sub> emissions)~~  
Limit: ~~3,637,750 gallons per consecutive twelve (12) month period. For the purposes of this limit, 1 gallon of butane is equal to 1.31 gallons of waste oil, 1 gallon of propane is equal to 1.19 gallons of waste oil, 1 gallon of No. 2 or No. 4 distillate oil is equal to 1.25 gallons of waste oil, and 1 million cubic feet of natural gas is equal to using 6,289 gallons of waste oil~~  
~~NO<sub>x</sub> emissions to no more than 29.07 tons per year and total source NO<sub>x</sub> emissions of less than 100 tons per year~~  
Limit: ~~1,850,467.29~~ **528,000** gallons per consecutive twelve (12) month period. For the purposes of this limit, use the following conversions:

- |     |                 |            |   |                           |   |                           |
|-----|-----------------|------------|---|---------------------------|---|---------------------------|
| (a) | Natural Gas:    | 0.00704225 | * | cubic feet of Natural Gas | = | gallons of Re-refined Oil |
| (b) | No. 2 Fuel Oil: | 0.9718309  | * | gallons of No. 2 Fuel Oil | = | gallons of Re-refined Oil |
| (c) | No. 4 Fuel Oil: | 1.028169   | * | gallons of No. 4 Fuel Oil | = | gallons of Re-refined Oil |
| (d) | Propane:        | 0.661971   | * | gallons of Propane        | = | gallons of Re-refined Oil |
| (e) | Butane:         | 0.7183098  | * | gallons of Butane         | = | gallons of Re-refined Oil |

~~SO<sub>2</sub> emissions from the aggregate dryer of no more than 99.0 tons per year and The total source SO<sub>2</sub> emissions of from plant 03286 shall be less than 400 39.60 tons per year.~~

YEAR:

Month	This Month			Previous 11 Months	12-Month Total
	Waste Re-refined Oil usage (gallons)	Waste Re-refined Oil equivalent of other fuels (ex. 1.31 x butane usage) (gallons)	Total Equivalent Waste Re-refined Oil usage (gallons)	Waste Re-refined Oil used + waste re-refined oil equivalent of other fuels used (gallons)	Waste Re-refined Oil used + waste re-refined oil equivalent of other fuels used (gallons)

- 9 No deviation occurred in this quarter.  
9 Deviation/s occurred in this quarter.

Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
**OFFICE OF AIR QUALITY**  
**COMPLIANCE DATA SECTION**  
**FESOP Quarterly Report**

Source Name: Rieth-Riley Construction Company, Inc.  
Source Address: 3425 O'Farrel Road, Lafayette, IN 47904  
Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477  
FESOP No.: F 157-5448-03286  
Facility: One (1) aggregate dryer at Plant 03310 - Section D.1  
Parameter: Re-refined oil usage (SO<sub>2</sub> emissions)  
Limit: ~~1,850,467.29~~ **792,000** gallons per consecutive twelve (12) month period. For the purposes of this limit, use the following conversions:

- |                     |            |   |                           |   |                           |
|---------------------|------------|---|---------------------------|---|---------------------------|
| (a) Natural Gas:    | 0.00704225 | * | cubic feet of Natural Gas | = | gallons of Re-refined Oil |
| (b) No. 2 Fuel Oil: | 0.9718309  | * | gallons of No. 2 Fuel Oil | = | gallons of Re-refined Oil |
| (c) No. 4 Fuel Oil: | 1.028169   | * | gallons of No. 4 Fuel Oil | = | gallons of Re-refined Oil |
| (d) Propane:        | 0.661971   | * | gallons of Propane        | = | gallons of Re-refined Oil |
| (e) Butane:         | 0.7183098  | * | gallons of Butane         | = | gallons of Re-refined Oil |

The total SO<sub>2</sub> emissions from plant 03310 shall be less than 59.40 tons per year.

YEAR: \_\_\_\_\_

Month	This Month			Previous 11 Months	12-Month Total
	Re-refined Oil Usage (gallons)	Re-refined Oil Equivalent (gallons)	Total Equivalent Re-refined Oil Usage (gallons)	Re-refined Oil Used + Re-refined Oil Equivalent (gallons)	Re-refined Oil used + Re-refined Oil Equivalent (gallons)

- 9 No deviation occurred in this quarter.  
9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

A certification is not required for this report.